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INDUSTRIAL CANADA

A MONTHLY REVIEW OF MANUFACTURE AND COMMERCE

AUGUST, 1904

July 1905

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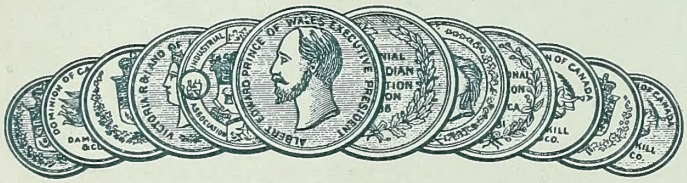
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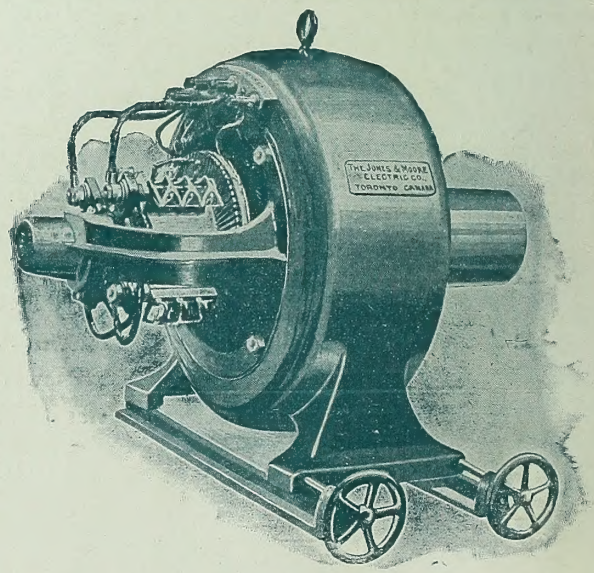
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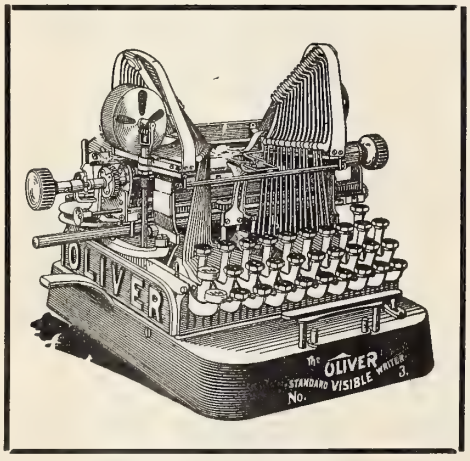
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Vol. V. TORONTO, AUGUST, 1904. No. 1

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association, and devoted to the advancement of the commercial prosperity of Canada.

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1. All Members of the Canadian Manufacturers' Association.
2. The British Consuls, the world over.
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MANUFACTURERS who have not yet taken their summer outing could not find a better holiday land than the Maritime Provinces of Canada. The summer climate is delightful, the scenery is lovely and the people hospitable.

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The people of central and western Canada are too much inclined to regard the Maritime Provinces as far away and difficult of access. They often visit sections of the United States that are far more inaccessible. A traveller leaving Montreal in the evening on the "Ocean Limited," the Intercolonial fast express, will arrive at Halifax early the next evening, passing through sections of great scenic beauty in both New Brunswick and Nova Scotia, or if he takes the Canadian Pacific short line in the evening he may reach St. John before noon the next day. From St. John he can proceed by rail to Halifax or cross the Bay of Fundy by fast steamship to Digby, making rail connection there with all points in Nova Scotia. Railway travelling in the Maritime Provinces is as comfortable as anywhere else in America, for both the Intercolonial and Canadian Pacific Railways have fast trains equipped with luxurious sleepers and dining cars. The Government railway system extends to all parts of the Maritime Provinces, and has about 1,600 miles of track. The roadbed is first class, heavy rails have been laid and trains run swiftly and smoothly.

No man can fully appreciate the greatness of Canada until he has seen the Maritime Provinces with their magnificent harbors, their hills and valleys, their forests, lakes and rivers, their wonderful tides, their dyked lands, their fruitful orchards, their fishing villages, their great coal mines. Every Canadian who has not visited St. John and Halifax and the surrounding country should regard it as a duty of citizenship to do so, and a pleasant duty he will find it if he goes in summer time.

PULLED OUT HALF ITS TEETH

WHEN the burglar reproached his friend, the maid servant, because she had failed to poison the watch dog as she promised to do she replied : "I was afraid of being dismissed if I killed it, but *I pulled out half its teeth.*"

Hon. Mr. Fielding can make the same excuse when his free trade friends reproach him for adopting the dumping clause proposed by certain manufacturers as a preventive of slaughtering. As explained in the last number of INDUSTRIAL CANADA the Government was asked to provide that when foreign goods were sold to Canadians below the market price in the country of production the difference between the fair market price and the slaughter price should be added to the duties. Mr. Fielding accepted the proposal with the limitation that in general practice the special duties shall not exceed 50 per cent. of the ordinary duties and that in the case of certain specified items in the iron schedule they shall not exceed 15 per cent. ad valorem.

Sir Wilfrid Laurier has stated that the duties on goods imported from the United States average 28 per cent. and that it is the regular practice for United States manufacturers to sell to the Canadian consumer at least 30 per cent. below the market price in the United States. Thus the dumping clause on the average will provide for 14 per cent. special duty or less than half the cut which according to Sir Wilfrid Laurier it is the custom to make. In asking Parliament to enact this law the government acknowledged that dumping is a serious evil and that it ought to be stopped, but it practically gives notice to the dumpers that if they cut deep enough they will escape punishment. If it is right to give the Canadian manufacturer protection against the foreign manufacturer who cuts prices to the extent of 15 per cent., why should there not be protection against the one who cuts to the extent of 30 per cent. ?

NOTICES

Annual Meeting Canadian Manufacturers' Association, Windsor Hotel, Montreal, September 20th, 21st and 22nd.

Executive Council, Canadian Manufacturers' Association, regular monthly meeting, Board of Trade Building, Toronto, Wednesday, August 18th, at 2 p.m.

Toronto Branch, annual meeting, Board of Trade Building, Toronto, August 11th, at 2 p.m.

Montreal Branch, annual meeting, Board of Trade Building, Montreal, August 30th, at 2.30 p.m.

FARMERS AND IMPERIAL PREFERENCE

IF the agitation in favor of Imperial Preferential Trade results in a preference being granted to colonial farm products in the British market, Canadian farmers will owe a debt of gratitude to the Canadian Manufacturers' Association and the Boards of Trade of the leading cities of Canada which are largely composed of men interested in Canadian manufacturing industries. The farmers themselves have manifested very little public interest in the matter, and some of the newspapers which professed to be the special champions of Canadian farmers scoffed at the idea that substantial support could ever be obtained in Britain for such proposals.

Sir Wilfrid Laurier on one of his visits to England had publicly stated that Canadians did not desire a preference in the British market and advised the British people not to make such a departure from their free trade policy. Several resolutions in favor of mutual preferential trade were introduced in the Canadian House of Commons, but every Liberal member voted against them and they were defeated by large majorities. Nevertheless Liberals and Conservatives in the Boards of Trade and the Canadian Manufacturers' Association cordially co-operated in favor of the principle of mutual preference. Emphatic resolutions were passed almost unanimously by these great non-political associations of business men; delegates were sent to Britain to bring the matter to the attention of British statesmen and the great commercial organizations of the Mother Country. It is no exaggeration to say that Mr. Chamberlain would never have begun his agitation for fiscal reform if Canadian delegates to the meetings of the Chambers of Commerce of the Empire had not earnestly advocated mutual preferential trade.

It has never been denied by anyone that a preference in the British market will be of immense advantage to Canadian farmers. Those who objected to the efforts of the Boards of Trade and the Canadian Manufacturers' Association to secure it did so on the ground that there was no use trying. But the doubters are not quite so positive now as they once were, and before long we may expect to see them become enthusiastic supporters of the policy.

WHAT MR. CHAMBERLAIN TOLD MR. DRUMMOND

THE banquet in honor of Mr. George E. Drummond, President of the Canadian Manufacturers' Association, held in Montreal on July 21, was an expression of appreciation of the great interest he has taken in advancing the cause of Imperial Preferential Trade. Mr. Drummond is now President of the Montreal Board of Trade as well as of the Canadian Manufacturers' Association and his great aim for some years past has been to promote the adoption of a system of mutual preference which, while beneficial alike to the Mother Country and the colonies, would not require any sacrifice of Canadian interests. The preferential trade agitation might have resulted in an arrangement most injurious to Canadian manufacturers had not the various Canadian Boards of Trade and the Canadian Manufacturers' Association passed resolutions clearly stating the basis upon which they would support an Imperial Preference and taken pains to bring their views to the attention of Mr. Chamberlain and the Chambers of Commerce of the Empire. It has been frequently alleged by Canadian opponents of protection that Canadian manufacturers were inconsistent in passing resolutions favorable to Imperial Preferential Trade while at the same time advocating the adoption of a minimum tariff affording adequate protection to all Canadian industries. Mr. Drummond while in Britain was in conference with Mr. Chamberlain and other leading British statesmen and he was able to assure those present at the banquet in Montreal that Mr. Chamberlain's views are quite in accord with those held by members of the Canadian Manufacturers' Association. Mr. Drummond said :

"Mr. Chamberlain is fully convinced that the time has come for a reorganization of the Empire, and that the best, safest and surest way to effect a permanent consolidation of interests is through the medium of a mutual arrangement by which each section of the Empire will grant to the products of the others a preference as against the products of foreign labor. In this, Mr. Chamberlain's idea is exactly in accord with the view held and publicly expressed again and again by the Boards of Trade and Chambers of Commerce of Canada, a view that has been fully endorsed by the Canadian Manufacturers' Association. *Mr. Chamberlain, in speaking to me on the subject, repudiated strongly the statement which has been made that he expects Canada, under a preferential arrangement, to sacrifice, or in the slightest degree to hinder or curtail, the fullest possible development of the industrial enterprises that we have already established, or may hereafter establish. Mr. Chamberlain's views are quite in accord with those held by the members of the Canadian Manufacturers' Association.* We believe that an effective, well considered mutual arrangement may be arrived at by which, while local interests in the United Kingdom and in the Colonies can be fully and equitably safeguarded and kept prosperous, yet at the same time a very large trade that now goes to foreign and commercially antagonistic capital and labor can be diverted to our own people within the Empire."

Mr. Drummond's statement of Mr. Chamberlain's views is borne out by Mr. Chamberlain's Tynemouth speech which has already been quoted in "INDUSTRIAL CANADA," but will bear repetition. Mr. Chamberlain said at Tynemouth :

"There has been a misapprehension as to something I said at Glasgow and I want to make this clear, and I ask the great agencies of the press to convey my views to the colonies. I want what I say now to go to the colonies. I have just seen a manifesto issued by the National Liberal Federation, and signed by Mr. Augustine Birrell, whose facetiousness in other walks of life has given us all so much amusement. But in this political manifesto he says that my proposal is that the colonies are to enter into a self-denying ordinance never at any time and in any circumstances to extend the number of their manufacturers, or to conquer new fields of commerce in competition with Great Britain. Now, facetiousness is all very well but it goes too far when it gives effect to such a gross misrepresentation as that. Of course the object is perfectly clear. It is to induce the colonies to believe that I am blind to their natural conditions, to their own necessities, and that I am prepared to stop their progress, close it down absolutely and arbitrarily, in order to secure certain advantages for this country. I have never said anything of the kind, but it is printed as though it were a paraphrase of what I have said (cheers). I have said nothing of the kind, and nothing of the kind would be possible if I had said it. No sir, the colonists, I think, know me. They know that under no circumstances do I want to interfere with their commercial freedom any more than I should like them to interfere with our commercial freedom. We have given them full power to decide for themselves as to what their fiscal policy should be. When we come together in negotiation, we shall see how far we can arrange our fiscal policies to suit mutual interests. Neither has the right to say to the other : "You shall do this or you shall do that ; or you shall be blamed if you do not do it" (cheers). And in the second place they know that I would be the last man to propose to stereotype their progress. They will be great nations in the future. Small nations now, but in imagination cannot you see what they are certain to become ? It is possible that in the life of children now living the population of these self-governing colonies may be greater than the population of the Mother Country. Think not only of the present and ourselves, but think of the future when these great States have become great nations—whether it is to be that you have travelled with them and they with you, or whether they are to be separately established, separately considered, and with separate interests."

MERCHANTS AND THE DUMPING CLAUSE

THE dumping clause as enacted will be a source of continual irritation to general merchants, especially those doing business in small towns and country places. It is impossible for the ordinary merchant to keep posted regarding the exact market price of every article in the country from which it is imported. He knows the prices at which he can buy in Canada but he cannot tell whether the commercial traveller from the United States is cutting prices below the home rate or not. The customs official in his town may decide that there has been a cut and call for payment

of the special dumping duty. But a merchant in a neighboring town may buy goods from the same traveller at the same price and escape payment of the special duty because the local customs official does not know the exact price in the United States. Neither merchant intends to violate the law but one has an advantage over the other because the customs officials in the two towns value the goods differently. Prices are continually fluctuating and it is inevitable that the valuations of different customs officials will vary widely. Then in cases where the prices in the foreign markets are well known it will be easy for the foreign manufacturer to evade the dumping law by invoicing goods at the regular market price and giving customers a rebate or discount when payment is made. Some merchants will be too conscientious to evade the payment of the special duty in this way, but others will be less scrupulous and the conscientious merchant will therefore do business at a disadvantage and be unable to compete with his rival. How much better it would be to protect the home producers by adequate specific duties on imports. With a system of specific duties in force every merchant would know exactly what duty he must pay on any imported article. The customs officials would be relieved from the difficult task of deciding the exact price of every article in the country where it was manufactured and the same duty would be charged at every customs house in the country. Can any one doubt that such a system would be less embarrassing to the general merchant than the uncertain and harassing dumping law?

A SURRENDER OF PARLIAMENTARY POWERS

IN the United States and the United Kingdom the tariff is made by Congress or Parliament and can only be altered by Congress or Parliament. The Government of the country is entrusted with the administration of the tariff, but it has no power to alter the tariff. This was formerly the custom of Canada also, but in recent years Parliament has to some extent delegated its tariff-making authority to the Government. The first move in this direction was the law which authorized the Government to impose an export duty on unrefined nickel. Parliament instead of enacting that such a tax should be imposed immediately merely gave the Government permission to impose it. It was fully expected at the time that the duty would be levied unless the Government received assurances from the United States capitalists who owned the Canadian nickel mines that refining works would be established in Canada. But no action was ever taken in the matter although some of the members of the Government paid a visit to the works in New Jersey where the Canadian nickel is refined. Parliament next gave the Government power to abolish or lower the customs duty on any article when satisfied that the price was unduly raised by trusts or combines. This power was exercised in the case of the duty on paper. During the session of 1903 the Government was authorized to place a duty on steel rails in case the Governor-in-Council should decide at any time that rails are being made in Canada in sufficient quantities to supply the ordinary requirements of the market. The duty has not yet been imposed. After passing the dumping law during the session of 1904 Parliament specially authorized the Minister of Customs to suspend the law at any time in reference to any article which he thinks is not made in Canada in substantial quantities and offered for sale to all purchasers on equal terms.

Parliament appears to be gradually delegating its tariff-making powers to the Government. Each session some new power is given to Ministers to alter the tariff between sessions as they may think right.

This is a remarkable departure from democratic principles as established by long usage in the great English-speaking nations.

We do not mean to imply that the present Government has asked for these powers with any evil intention, but unscrupulous politicians might use them to punish enemies and reward friends. Canadian manufacturers could be forced to contribute to the campaign fund of the party in power or contributions might be accepted from foreign manufacturers. The members of a Government having such extraordinary powers will very often need to pray,—"Lead us not into temptation."

THE DUMPING CLAUSE AMENDED

THE dumping clause as expounded by Mr. Fielding in his Budget Speech has since been amended. The Minister of Customs is now authorized to make regulations providing for "the temporary exemption from special duty of any article or class of articles, when it is established to the satisfaction of the Minister of Customs that such articles are not made in Canada in substantial quantities and offered for sale to all purchasers on equal terms."

This gives the Minister of Customs an extraordinary power of discrimination against small industries. Some of the most successful manufacturers in the world started business on a small scale with very little capital. They did not at the outset manufacture in substantial quantities, but they gradually increased their output until immense quantities of goods were made in their factories. The little industries that gradually grow into big ones are often of more value to a country than those that grow up like mushrooms. Yet these little industries are the ones that most need protection against dumping, for they can be most easily exterminated at the start by unfair foreign competition.

It is true that the small manufacturers do not often contribute to the campaign fund of either political party and the big ones sometimes do, but this is no reason why Parliament should authorize the Minister of Customs to discriminate against the small manufacturers.

However, the small industries are not the only ones affected by this amendment to the dumping clause. Mr. Fielding explained in the House of Commons, on June 28, that this amendment would enable the Minister of Customs to suspend the dumping clause in case of a strike which would stop the manufacture of an article in the country. This is a most dangerous provision. It might cause foreign manufacturers or foreign workmen to incite strikes in Canada, and it will certainly tend to set the minds of workingmen against the protection which is as necessary for them as for their employers. The exercise of this power by the Minister of Customs would be most injurious to Canadian workmen. While employers and workingmen were disputing, the agents of foreign manufacturers would be taking orders, and the result would be that, the employers having few orders to fill, the strike would be turned into a lock-out. It is a well-known fact that strikes are rarely successful when orders are slack. Manufacturers are much more ready to yield to the demands of their employees when business is good, and consequently while the withdrawal of protection would cripple the manufacturer, it would not in any way benefit his employees ; but the workingmen would not always realize this, and consequently they might demand the suspension of the dumping clause in the hope of coercing their employers.

THE TRIPLE TARIFF

THE first report of the Tariff Commission appointed by the British Government some months ago has been issued. In a bulky volume the Commission shows that the iron and steel trades are suffering severely from foreign competition, and recommends the adoption of a system of triple tariffs, arranged as follows :

(*a*) A general tariff consisting of a low scale of duties for foreign countries admitting British wares on fair terms.

(*b*) A preferential tariff, lower than the general tariff, for the colonies, giving adequate preference to British manufacturers, and framed to secure freer trade within the British Empire.

(*c*) A maximum tariff consisting of comparatively higher duties, but subject to reduction by negotiation to the level of the general tariff.

The Toronto *World*, referring to this report, says :

> "A remarkable feature of the report is its curious resemblance to things proposed or promised in Mr. Fielding's last budget speech. It is open to any enthusiastic friend of Mr. Fielding to say that he is making the pace for Mr. Chamberlain, and also open to any enthusiastic friend of Mr. Chamberlain to say that Mr. Fielding must have got hold of an advance copy of the Chamberlain report."

As a matter of fact it was announced many months ago that this was the plan Mr. Chamberlain had in view, so it is certain that Mr. Chamberlain's Committee did not get the idea from Mr. Fielding's budget speech. The fact that the tariff system proposed by Mr. Fielding, but not yet adopted by the Laurier Government, bears a marked resemblance to the proposed Chamberlain tariff will not necessarily recommend it to the Canadian people. The conditions in Canada are very different from those prevailing in the United Kingdom, and a system of low protection that might be very satisfactory for Great Britain might prove altogether inadequate for Canada. The industries of the United Kingdom have been long established ; the home population is concentrated within a very small area easily accessible to the factories ; splendid mercantile fleets connect British ports with all parts of the world, affording cheap rates for the transportation of manufactured goods to foreign markets ; there is an immense accumulation of capital in the British Isles and the interest rate is very low. When Britain adopted free trade its manufacturing industries (built up by long continued high protection) were so far in advance of those of all other countries, that if the other nations had immediately adopted free trade the United Kingdom might have become the workshop of the world as Cobden anticipated. After half a century of free imports and taxed exports the British manufacturers realize that they have to a great extent lost their supremacy, but they still believe that with open competition unrestricted by tariffs they would be able to hold their own.

The position of Canadian manufacturers is very different. The home consumers of Canada are scattered over an immense area ; they can be reached as easily by railways from the great industrial centres of the United States as from Canadian factories ; the railways sometimes even discriminate in favor of the manufacturers of the United States ; the transportation facilities from Canadian ports to foreign markets are far inferior to those from British ports, the steamship rates being higher and the service irregular ; the rate of interest is very much higher in Canada than in Britain ; the scale of living for Canadian workingmen is very much higher than for British workingmen, and Canadian manufacturers must therefore pay higher wages.

British manufacturers may well be content with a low scale of duties for foreign countries admitting British wares on fair terms. The great aim of the British tariff will be to secure reciprocity with countries having high tariffs, and the British manufacturers would welcome reciprocity with the United States. But Canadian manufacturers do not want reciprocity with the United States. When Canadian manufacturers have enjoyed high protection as long as British manufacturers did before free trade was adopted, or as long as the manufacturers of the United States have had high protection, perhaps they may be so well established as to have no fear of reciprocity with the United States, but at present they do fear reciprocity, and they do not want Parliament to enact a tariff that will give the Government power at any time to reduce the protection against the United States, Germany and other foreign countries.

THE PRESENT POSITION OF FIRE INSURANCE

IT is now over three months since the Toronto fire, which was followed immediately by the high-handed action of the Canadian Board of Fire Underwriters, in increasing the rates in the congested district by one dollar, and the rates outside of the congested district in Toronto and in several of the important commercial centres of the Dominion by fifty cents. The underwriters have not seen fit to reconsider this arbitrary action. It may be possible that they can ignore their clients for a short time, or in fact get along without a large number of them altogether. It is possible, however, that if they will not take a reasonable view of the situation that the withdrawal of insurance will force them to adjust their rates.

If it is a fact, as the insurance companies claim, that they can not carry insurance at lower rates than they are charging at present, there is still a big field for them to work in when they take up the matter of reducing their expense accounts. When a manufacturer considers that from 30 per cent. to 40 per cent. of the different cheques he signs for insurance goes to pay the agents and expenses of management of the insurance companies, he is not as careful with his insurance as with the other expenses around his factory if he does not stop to enquire the reason why. The manufacturer may be willing to grant that the insurance agent who secures a new policy for his company is entitled to a commission amounting probably to as much as 20 per cent., but when the agent brings a renewal receipt and on the renewal collects a further 20 per cent. the proposition is ridiculous.

Up to the present time the results of the increase in rates have been noted in three different ways. In the first place it was necessary, (but very unfortunate) for a few manufacturers to allow some of their policies to lapse on account of the premiums being too much for their incomes to stand. Other manufacturers have withdrawn some of their policies from the Board Companies and are carrying more of their insurance than formerly with those companies that have taken a more reasonable view of the situation. The third class are those who have adopted a course which everyone will very highly commend. They have refused to be held up by the Board Companies and have opened negotiations with Mutual Companies, particularly the New England Mutual Companies of Boston and Providence. The result has been that by an initial outlay, not at all serious, they have been able to insure their buildings and plant at a cost of not more than one-tenth of what they previously paid. The cost of their initial outlay will be recouped in one, two, three, or at the most four years and in the meantime they enjoy the advantages of up-to-date fire protection. To any manufacturer whose factory is such that it can be equipped so as to be accepted by the New England Mutual Companies, we have no hesitation in recommending him to place his insurance with them. Their Companies have been most successful and most satisfactory to deal with.

The Canadian Manufacturers' Association did not take hold of the fire insurance question with the intention of letting it drop until some results were obtained. The Committee have been working steadily on the matter ever since the fire. They have gone so far as to prepare a rough plan for the organization of a fire insurance department. It is the intention that this department will be able to carry a certain amount of each of the risks of the members of the Association and probably also other risks. Details of the scheme are however not to be made public until the best expert advice obtainable is secured.

The plan has been discussed by the Halifax, Quebec, Montreal, Toronto and Winnipeg branches. In each case it was the most interesting topic on the agenda and in each case the Executive Council was unanimously told to go ahead. The Toronto Branch, (as appears in the minutes of its meeting, published in another column) suggested that the Insurance Committee ask the Executive Council for authority to secure expert information and advice. This suggestion met with the approval of the Executive Council and an appropriation was made for the purposes of the Committee. Action has already been taken to secure the assistance necessary.

The members of the Canadian Manufacturers' Association who have replied to the circular letter sent to them report insurance

amounting to over $97,000,000. A moderate estimate of the amount of insurance carried by the members of the Association would be $150,000,000. It would be impossible for any new company to attempt to carry but a small percentage of this and it is not expected that the Insurance Committee will advocate the organization of a department that will accept and carry on its own account any large risks.

As an instance, however, of how a successful insurance company can be organized from a very small start the figures from a statement issued by the Retail Hardware Dealers Mutual Fire Insurance Company of Minneapolis, which have been kindly forwarded to our Association are very interesting. Previously to 1900 the Underwriters in Minneapolis were not willing to discuss and revise their tariff and the only alternative for the hardware dealers was the formation of the above company. This company started the insurance business in January, 1900 and accepted no risks for over $3,000. It charged for its premiums the same rate as charged by the Board Companies. At the end of June, 1904, or four and a half years after organization the company carried insurance to the amount of $1,625,633. The gross losses during that period have amounted to 25% of the premium income. The total expenses of the company for four years and a half are 13% of the premium income. The company has been able to return to its policy holders each year 20% of the total amount of premiums paid by them, and at the present time has cash on hand amounting to $42,334 and a snug surplus of $25,808.

The members of the Manufacturers' Association all over Canada are urging the Insurance Committee of the Association to act and it is practically decided that the Association will, if it is impossible to get the rates reduced, provide an insurance where there will be a reduction in the expenses of carrying on the business of at least 20% of the premiums.

THE METRIC SYSTEM AN AID TO STANDARDIZATION.

Referring to the proposed adoption of the Metric System as the only legal system of weights and measures, a correspondent points out that legislation of this kind would be a great boon to both machine and metal work trades inasmuch as they would be standardized.

"Our firm," he writes, "have for years been endeavoring to sell or purchase electrical supplies in the United Kingdom. We have had special orders for electrical fixtures given to us by English people, and in order to have them properly made we have had to pay quite a little extra over the ordinary price. Added to this we have had to send to England templets of threads, etc., which were standard in this country. I think I can safely say without fear of contradiction that there are more than five hundred different kinds and styles of lamp sockets in use in the United Kingdom, and there is not one of them similar to those in use on the Continent of America. There are a few English sockets and fittings used in Canada that visitors have brought over from the Old Country when they have been on a pleasure trip. People who have done this have been compelled ever since to send to England for lamps and pay from forty to sixty cents for them when they could purchase just as good lamps in this country for about half the money had they standard fittings.

Every little machine shop and ship building company in the Old Country seems to have a standard of its own for brass goods, sockets and fittings, and places its orders with German companies for lamps to suit its own particular design. I think it almost a hopeless task to try to educate our English friends at this late date to change their ways and standardize their supplies in our line."

Should the Metric System be introduced into England and made a Government measure, it would most assuredly have the desired effect of bringing all these little concerns into line, benefiting thereby not only themselves, but the community at large who make use of their goods.

CENTRAL CANADA FAIR

Manufacturers are reminded that the Central Canada Fair will be held this year in Ottawa, from September 16th to 24th. It is a high class exhibition, that has given splendid results to all exhibitors at the sixteen shows held thus far. Space is free, power to operate machinery is supplied gratuitously, and every facility is afforded manufacturers for displaying to the best advantage. The show is a popular one with residents of Central and Eastern Ontario and Quebec, and the receipts during the past few years have shown a marked increase in attendance. Mr. E. McMahon is Secretary, and will gladly furnish all information required.

THE TRADE INDEX IN AUSTRALIA

During the month of June a large number of Trade Indexes were distributed throughout Australia to addresses supplied us by Mr. D. H. Ross, Commercial Agent of the Dominion Government. The press of Adelaide and Melbourne have been good enough to give the publication some favorable notices, a few of which are reproduced below. They illustrate the appreciation which the volume is meeting with in that country.

"From Mr. Raymond Birks we have received a copy of the Canadian Trade Index, published by the Canadian Manufacturers' Association for the purpose of providing home and foreign buyers with an accurate list of members of the Association and of the goods manufactured by them. The Association consists of over 1250 manufacturers drawn from every province of the Dominion. The work which is well printed runs into close on 500 pages, and is well calculated to serve the purpose designed."—*The Register*, Adelaide.

"To hand is a copy of the Canadian Trade Index. The work, which is published by the Canadian Manufacturers' Association, Toronto, is for free distribution outside of Canada. It contains a vast amount of information of value to those having business dealings with the Dominion.—*The Herald*, Melbourne.

The *Melbourne Argus* describes it as a publication which conveys the impression of the existence of large and diversified manufacturing interests, while the *Melbourne Age* says it is a volume which should prove useful to all who are commercially interested in Canada.

Convention Announcement

The Thirty-Third Annual General Meeting of the Canadian Manufacturers' Association will be held in the

Windsor Hotel, Montreal,

September 20th, 21st & 22nd.

The official program will be announced in our next issue. In the meantime, keep these dates free. This promises to be the most important meeting ever held by the Association, so let nothing interfere with your being present.

Remember the Time and Place

Executive Council

JULY MEETING

The regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Council Chamber, Board of Trade Building, on Wednesday, July 20th, at 2 p.m.

There were present,— Messrs. John Bertram, C. A. Birge, C. N. Candee, J. D. Chaplin, H. Cockshutt, Robt. Crean, R. A. Donald, E. B. Eddy, J. F. Ellis, P. W. Ellis, W. M. Gartshore, W. P. Gundy, R. Hobson, J. S. King, W. K. McNaught, A. S. Rogers, W. B. Rogers, J. D. Rolland and J. O. Thorn.

In the absence of the President and 1st Vice-President, Mr. W. K. McNaught occupied the chair.

Communications were received from the following members of the Executive who were unable to be present,—Messrs. Geo. E. Drummond, W. K. George, Geo. Booth, Jas. Maxwell, C. R. H. Warnock, Geo. D. Forbes, S. W. Ewing, J. M. Taylor, J. P. Murray, Henry Wright, John Dick, Geo. E. Amyot, C. H. Carrier.

The reports of the various officers and committees were submitted as follows and upon motion were regularly adopted.

TREASURER'S STATEMENT

In the absence of the Treasurer, Mr. Booth, the Secretary, presented his statement showing a satisfactory state of the finances of the Association for the past eleven months.

SECRETARY

The Secretary reported that during the month he had been present at the Annual Meeting of the Halifax Branch on June 30th and of the Quebec Branch on July 4th. He reported that the interest of the members of both branches was well maintained. The reports of these meetings are published at length in another column of this issue.

The Secretary called the attention of the members to the banquet to be tendered the President of the Association, Mr. Geo. E. Drummond, in Montreal on July 21st and urged the members of the Executive Council to be present.

FINANCE

Mr. P. W. Ellis presented the report of the Finance Committee. It recommended the payment of the different items of expenditure for the past month. The report also recommended that an additional grant not to exceed $200 should be made to the Transportation Department to enable it to carry on the work for the balance of the Association year.

The Committee also considered that the office facilities were not such as they should be and recommended that an office on the 4th floor of the Board of Trade Building should be rented for the use of the Transportation Manager at a rental not to exceed $240 per year and that the telephone communication in the office should be improved at an increased cost of $129.50 per annum.

The Committee also approved of granting the request of the Special Committee of the Executive Council on Fire Insurance for a sum sufficient to enable it to make such enquiries as was deemed advisable.

The report approved of the attendance of the General Secretary at the Annual Meeting of the Manitoba Branch and at the Dominion Exhibition being held in Winnipeg.

RECEPTION AND MEMBERSHIP COMMITTEE

Mr. Robert Crean, the Chairman, presented this report. It recommended the acceptance of 18 applications for membership, the names of which appear in another column.

ANNUAL MEETING OF THE ASSOCIATION

The Committee recommended that the dates for the Annual Meeting of the Association, to be held in Montreal, should be Tuesday, Wednesday and Thursday, September 20th, 21st and 22nd ; that a Convention Badge be procured in Montreal, and that the following guests be invited to be present at the meetings of the Convention :

The Right Honorable Lord Strathcona, and Mount Royal ; Sir John Charles Ready Colomb, K.C.M.G., P.C., D.L., J.P., M.P. (Great Britain) Member of the Royal Commission on the Supply of Food and Raw Material in time of War and Author of several publications on questions of Defence, etc. ; Honorable Wm. Hayes Fisher, M.P. (Great Britain) the holder of several important Government offices and that of Financial Secretary to Treasury 1902-1903 ; Honorable R. H. McCarthy, Comptroller of Customs, Port of Spain, Trinidad ; Honorable Sir Robert Bond, K.C.M.G., Premier and Colonial Secretary of Newfoundland and the Honorable A. B. Morine, leader of the Opposition in the Newfoundland Parliament.

HAMILTON ORGANIZATION

The Committee also recommended that an expression of opinion should be asked from the members of the Association in Hamilton regarding the formation of a local organization which should take the form, for the present at least, of a regular day for luncheon, probably once a month.

PARLIAMENTARY

Mr. P. W. Ellis presented the report of the Parliamentary Committee.

The report gave a statement showing the number of employees required by the members of the Association on July 1st, 1904. This statement was classified according to trades and provinces. The total number of employees required was 6,717. The requirements by provinces were as follows : Ontario, 5,289 ; Quebec, 591; Maritime Provinces, 441 ; British Columbia, 225 ; Manitoba, 141. The report recommended that copies of this statement should be forwarded to the different members of the Cabinet and to thirty of the most important English newspapers.

RAILWAY AND TRANSPORTATION

The report was presented by the Chairman, Mr. J. O. Thorn. It dealt with the recent presentment made by the Manager of the Transportation Department before the Railway Commission regarding several individual complaints of members and also on the general question of classification. These different matters are dealt with at length in this issue.

Several of the members present complimented the Chairman and the Manager of the Transportation Department on the able way the work coming under their supervision was being conducted.

INDUSTRIAL CANADA

In the absence of the Chairman this report was submitted by the Secretary. It showed a satisfactory statement of the finances, and recommended that the next issue of "Industrial Canada" should be a special Transportation Number, and should contain a full report of the recent session in Toronto of the Board of Railway Commissioners. It recommended the engagement of the advertising solicitor, Mr. B. L. Anderson, for a period of six months, and decided to allow advertising agencies a commission off the regular advertising rates of "Industrial Canada."

DOMINION EXHIBITION

The Secretary reported for the Dominion Exhibition Committee that the many details in connection with the Winnipeg Exhibi-

tion had been carried out satisfactorily; that the exhibits of 110 Eastern manufacturers had already gone forward to Winnipeg, and that the Superintendent was in Winnipeg looking after the same.

FIRE INSURANCE

The report of this Committee was presented by Mr. R. A. Donald. The report commented on the great interest that was being taken in the question by the members all over Canada. The Committee reported that they had prepared a plan for the organization of a fire insurance department of the Canadian Manufacturers' Association, and that copies of the same had been forwarded to four of the Branches of the Association for their consideration. In each case the plan was received with marked interest, and the unanimous opinion was that the Association should organize a department which would relieve, in some measure at least, the members from the conditions under which they were forced to place their insurance at present.

The Toronto Branch had passed a resolution favoring the formation of a Department, and recommended the Fire Insurance Committee to request the Executive Council for authority to secure expert information and advice, and to set aside a grant for that purpose. The Insurance Committee, acting on this suggestion, requested a grant which request was approved of. The committee reported that it had added to its numbers Messrs. P. W. Ellis, W. K. George, W. P. Gundy, J. R. Shaw, and L. V. Dusseau, Toronto; C. C. Ballantyne, Montreal; R. Hobson, Hamilton, and Lieut. Col. Gartshore, London.

The report of the Toronto Branch was presented by Mr. C N. Candee, and the report of the Montreal Branch by the Hon. J. D. Rolland. Both of these reports appear in another column.

The meeting then adjourned.

TORONTO BRANCH

Good Progress in Fire Insurance Investigation

THE regular monthly meeting of the Toronto Branch was held on July 14th. There were present: Messrs. J. P. Murray (Chairman), J. S. McKinnon, C. N. Candee, Robert Crean, W. K. George, A. S. Rogers. J. T. Sheridan and R. J. Younge.

INDEPENDENT WATER MAINS

Several communications from the Inspection Department of the New England Mutuals discussed the question of independent water mains for fire protection. The Chairman and Secretary of the Branch reported that they had already interviewed the City Engineer and Chief of the Fire Department and put the opinions received before them. They reported also that it was the intention of the City Engineer and the Chief of the Fire Department to visit, in the near future, several cities of the United States to inspect the different systems of fire protection.

A CIVIC COMMITTEE

The Executive approved of the suggestion coming from the Employers' Association of Toronto that a joint committee should be appointed, to consist of representatives from the Board of Trade, Toronto Branch, Employers' Association, Retail Merchants' Association, and the Bankers' Association, to consider matters of civic importance, and to find out why Toronto has not secured of late years some of the important manufacturing establishments that have located in Canada. It was decided to leave the appointment of the representatives over to the incoming Executive.

SPECIFIC RATING OF FIRE RISKS

In reply to an enquiry from the Secretary of the Branch the Secretary of the Toronto Board of Fire Underwriters stated that it had not been decided when any or all of the specific ratings fixed by the Underwriters would be applied in the city.

INSURANCE DEPARTMENT

A plan for an Insurance Department of the Association was received from the special committee of the Executive Council. The same was carefully considered and the following resolution was passed and forwarded to the Insurance Committee:—

"That the Executive Committee of the Toronto Branch endorses the policy of organizing a special Branch of the Association to be known as the Insurance Department, for the purpose of providing insurance for the members of the Association.

"*And Further*: This Executive recommends that the special Fire Insurance Committee requests the Executive Council to empower them to secure expert information and advice with a view of formulating a comprehensive plan which would be practicable in its operations and beneficial in its results, no definite plan to be finally adopted without being first submitted for approval to the Executive Council or to the Annual General Meeting."

ANNUAL MEETING OF BRANCH

It was decided that the annual meeting of the Toronto Branch should be held on Thursday, August 11th, at 2 p.m.

MONTREAL BRANCH

Tariff and Insurance Questions Discussed—Objectionable Licenses —Lithographers' Section Formed

THE regular monthly meeting of the Montreal Executive was held on July 5th, with Mr. C. C. Ballantyne in the chair. There were also present: Messrs. J. J. McGill, R. C. Wilkins, J. T. Hagar, Geo. E. Drummond, J. E. Matthews, Hon. J. D. Rolland, D. L. McGibbon, Geo. Esplin and E. Tougas.

An Entertainment Committee was appointed to care for the local arrangements in regard to the annual meeting. Special arrangements will be made for the outside delegates attending the Convention in Montreal in September.

The tariff resolution recently passed by the Executive Council was laid before the meeting, and after some discussion the committee registered its opinion that the resolution correctly represented the views of this Executive regarding the Budget recently introduced into the House of Commons. It was felt, however, that a stronger resolution might have been seasonable.

A memorandum in regard to the establishment of an Insurance Department was laid before the meeting. It was the unanimous opinion of the Executive that, while the Association should not be financially responsible for any insurance scheme, it was doing good service in trying to find some means to secure a reduction in the insurance rates.

The Dinner Committee reported that the complimentary dinner to Mr. Drummond would be held on the 21st inst. in the Canada Club.

MUNICIPAL LICENSES

A letter was received from Mr. J. T. Hagar complaining of a Municipal License fee imposed upon engineers, and the Committee approved of a draft letter to be written to the City Council complaining not only of the license upon engineers, but also those placed upon stokers and masters and journeymen plumbers. A strong objection was taken to this means of raising revenue.

Mr. McGill reported for the Committee that had waited upon the Legislation Committee of the City Council re the abolition of the license upon motors and places dangerous for fire. The views of the Association had been favorably received by the Legislation Committee who had decided to recommend material changes in the clauses to the City Council. Since the meeting a technicality has been discovered that illegalizes the meeting and the interview will have to be repeated. It is probable that a larger delegation will then wait upon the City Council.

BUILDING RESTRICTIONS

It was drawn to the attention of the Executive that the City Council proposed to pass a By-law prohibiting the erection of factories within a certain district of the city. It was decided to address the Council expressing sympathy with the principle of the measure, but pointing out that there were a number of streets in the proposed district where factories would enhance rather than depreciate the value of surrounding property, and to recommend that the Council should be content with taking unto itself power to prevent the erection of factories within some thoroughly studied section making it necessary to procure the permit from the City Council which should be given only after due consideration of the situation and need of the industry. It was decided to ask also that the rights of the manufacturers now situated in that district should be preserved and that they should have power to extend or re-erect.

A communication was received from a member suggesting that our Association should advise the members through "INDUSTRIAL CANADA," of the expiration of patents and should establish the machinery whereby the members could obtain information in regard to the genuineness of patents. This letter was laid on the table.

The report of the Transportation Manager upon the presentation of the Association's cases before the Railway Commission was received and satisfaction was expressed at his success.

Three new members were admitted.

During the month a new Section was formed composed of Montreal Lithographers.

The Cotton Section has been convened on two occasions, taking action in regard to the tariff.

NOVA SCOTIA BRANCH

Second Annual Meeting at Halifax a decided success—
Alfred Dickie is elected President and W. J. Clayton, Vice-President

THE Annual Meeting of the Nova Scotia Branch of the Canadian Manufacturers' Association was held in the Halifax Hotel, on Thursday evening, June 30th. Mr. J. R. Henderson occupied the chair, and among those present were J. W. Allison, James Anderson, A. D. Campbell, Edward Clayton, W. J. Clayton, A. E. Collas, J. Crichton, T. M. Cutler, Jas. Dempster, J. R. Douglas, G. E. Faulkner, T. R. Gue, H. McC. Hart, J. P. Longard, B. F. Pearson, A. F. Pelton, C. H. Potts, David Roche, F. C. Simson, C. C. Starr, R. D. Taylor and R. J. Younge.

The report of J. R. Henderson, who retired from the Presidency after two years of splendid service, was read and adopted. Mr. Henderson reviewed the work done by the Branch during the past year, and outlined briefly the program for the future. The prospects for the expansion of the Association in Nova Scotia were, he considered, very bright.

The Secretary's report was presented by Mr. R. M. Hattie. It sketched in detail the work of the various committees and of the Executive, and referred among other things to the establishment of the Merchants' and Manufacturers' Bureau at the Provincial Exhibition, and to the satisfactory growth in membership.

In concluding, Mr. Hattie announced that his resignation as Secretary had been tendered to the Executive. General regret was expressed by the members present that Mr. Hattie had found it necessary to take this action. He had shown himself to be a faithful and efficient officer of the Association, and it was felt that the success of the Branch was due in no small measure to his energy and ability.

The report of the Transportation Committee was read and adopted. It recommended that an invitation be extended to Mr. W. H. D. Miller to visit Nova Scotia with a view to becoming better acquainted with the transportation grievances of local members, and in order to secure information that might assist in solving transportation problems in general.

Mr. A. D. Campbell then addressed the meeting in the interests of the Canadian Industrial League, bespeaking the support of the Nova Scotia Branch in furthering the cause of this worthy organization. He also touched upon the subject of trade with South America. The possibilities of this growing market were clearly pointed out, and many valuable suggestions given as to the policy which Canadians should follow in endeavoring to secure a share of the business.

The work of the general Association as carried on through its Committees and Branches was outlined by the Secretary, Mr. R. J. Younge, who laid special emphasis upon the benefits to be derived by members from the Transportation and Commercial Intelligence Departments. All the leading functions of the Association were referred to, and some of the most important results accomplished during the past year were reviewed in detail. Mr. Younge congratulated the Branch on the very able manner in which their work had been directed since their organization two years before, and stated that their reports were always listened to with great interest by the Executive Council in Toronto.

The claims of the Nova Scotia Provincial Exhibition on the manufacturers of the province were ably set forth by Mr. W. J. Clayton, who urged those present to add to the value and interest



ALFRED DICKIE,
President N.S. Branch, 1904-05.

of the exhibition by lending it their practical support. Mr. Clayton also commented on the excellent work being done by the Industrial League and endorsed its attitude on the matter of Canadian ports for Canadian people.

He was followed by Mr. J. P. Longard, who expressed him self along similar lines.

The report of the nominating committee was adopted and the following officers were duly elected for the ensuing year :—

President.—Alfred Dickie, Stewiacke.

Vice-President—W. J. Clayton, Halifax.

Executive—N. B. Smith, F. J. Ward, J. R. Henderson, J. P. Longard, W. B. Taylor, T. M. Cutler, G. S. Troop, Alexander McNeil, Halifax ; C. J. Silliker, A. F. Pelton, H. L. Hewson, Amherst; Harvey Graham, James Munro, New Glasgow; Ernest Hill, Dartmouth; H. H. Hamilton, Pictou.

Before adjournment Mr. B. F. Pearson spoke on the position of the coal trade of Canada, touching most interestingly on its future prospects, the attitude which the country and the Government might be expected to assume towards it, and what an intelligent people should do to ensure the prosperity of so important an industry.

At a subsequent meeting of the Executive the following committees were appointed for the year :

Finance—T. M. Cutler, F. J. Ward.

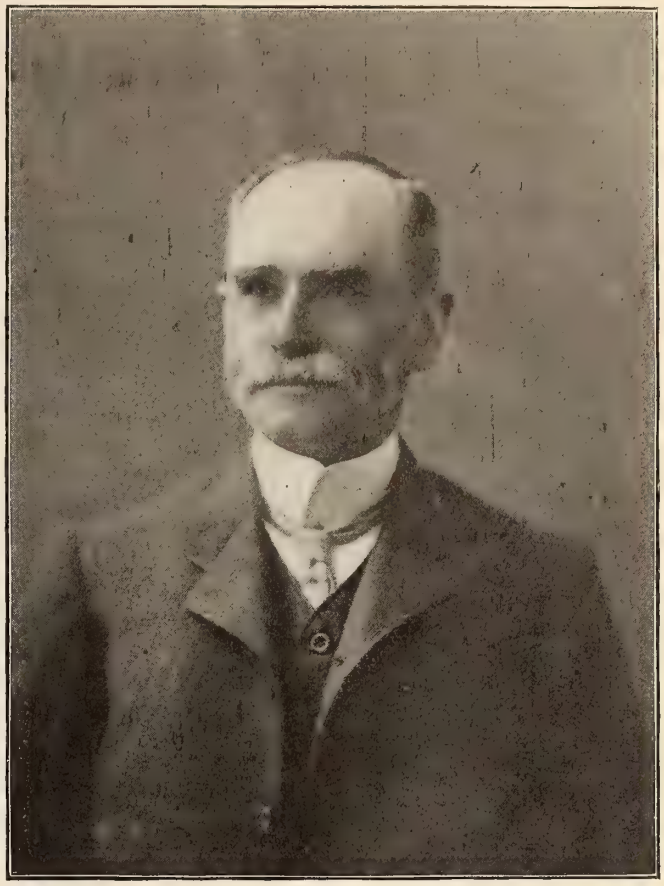
Membership—J. P. Longard, A. F. Pelton, J. R. Henderson.

Legislative—B. F. Pearson, John F. Stairs, W. J. Clayton.

Transportation—Alfred Dickie, Frank C. Simson, A. F. Pelton, James Dempster, N. B. Smith.

Special Coal Duty Committee—B. F. Pearson, Wm. Lithgow John F. Stairs, Harvey Graham, Alex McNeil, with power to add to their number.

Special Insurance Committee—T. M. Cutler, A. E. Collas, J. R. Henderson, A. MacKinley, J. W. Allison.



W. J. CLAYTON,
Vice-President N.S. Branch, 1904-05.

QUEBEC BRANCH

Addresses by the Chairman and General Secretary - The Year's Work Reviewed—New Officers Elected

THE second annual meeting of the Quebec Branch of the Canadian Manufacturers' Association was held in the hall of the Union Commerciale Building on Monday, July 4th. The following members were present :

Geo. E. Amyot, Dominion Corset Mfg. Co.; G. A. Vandry, J. Arthur Paquet, J. A. Scott, Shaw Cassils & Co.; J. J. Timmons, M. Timmons & Son ; J. S. Langlois, J. S. Langlois & Co.; Major Hethrington, Thos. Hethrington ; C. Blouin, J. B. Blouin & Son ; Jos. Pouliot, J. S. Pouliot & Frere : Dr. Morin, Dr. Ed. Morin & Cie. ; R. J. Younge, Secretary ; Jos. Picard, The Rock City Tobacco Co.

After the minutes of the last meeting had been read and approved, the Chairman, Mr. Geo. E. Amyot, presented his report covering the work of the Branch for the year just closed. He first referred to the establishment of the Transportation Department in connection with the Association, and cited a number of instances in which members of the Quebec Branch had been materially benefited by availing themselves of the services of the Transportation Manager. The banquet held under the auspices of the Local Branch on March 5th was pronounced a distinct success. It had been thoroughly enjoyed by visiting brethren, and had served a useful purpose in making the Association and the individual members better known throughout the province. The appointment of a Parliamentary Committee to keep a careful watch over legislation had been justified by their success in having an objectionable measure known as Bill "L" thrown out. The question of insurance and the improvement of the city's system of fire protection had come up for consideration, and would doubtless prove to be one of the most important subjects that the incoming Executive would have to deal with.

In conclusion Mr. Amyot thanked those present for the support which they had given him during his two years' tenure of office, urging them to continue to lend their personal interest to all questions that the Quebec Branch might be called upon to consider.

The Chairman was followed by Mr. R. J. Younge, who reviewed in considerable detail the results achieved by the general Association during the preceding year. All of its committees were shown to have worked with more than usual vigor, while the scope of the Association's usefulness had been greatly increased by the addition of a number of new and valuable features.

The report of the Local Secretary, Mr. Jos. Picard, was read and adopted. It referred to the satisfactory state of the Branch's finances, and reported a net increase in membership of fourteen.

The election of officers for the ensuing year resulted as follows :

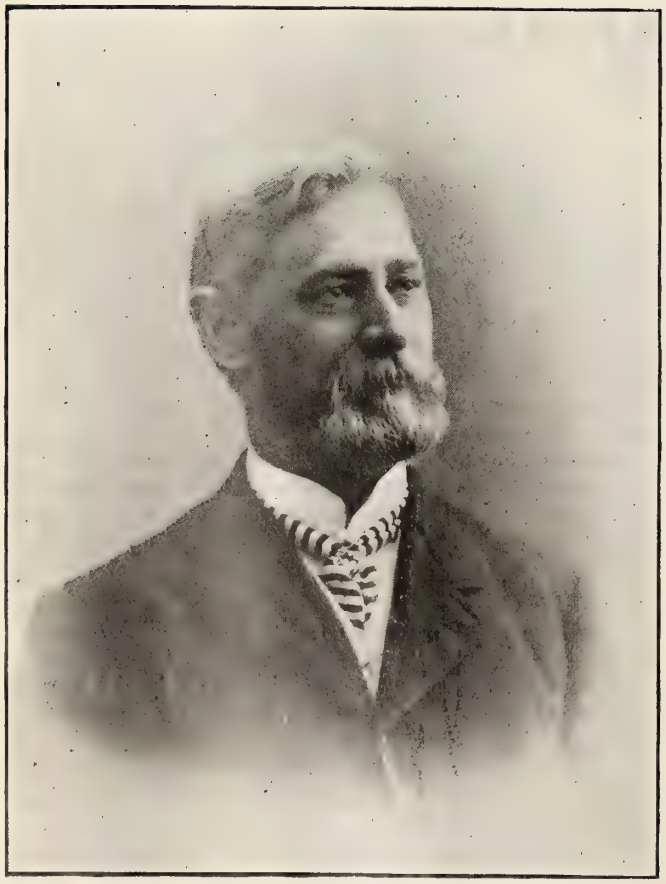
President, G. A. Vandry ; Vice-President, Wm. Marsh : Secretary, Jos. Picard ; Representatives to the General Executive, J. J. Timmons, G. E. Amyot and C Blouin ; Executive Council of the Quebec Branch, H. Carrier, J. S. Langlois, G. E. Amyot, Dr. Morin and Major Hethrington.

A special committee was also appointed to watch both the Federal and Provincial Legislatures for matters involving the interests of manufacturers.

A vote of thanks was tendered to the retiring President, Mr. Geo. E. Amyot, for the admirable manner in which he had directed the affairs of the Branch since its organization, and also to Mr. R. J. Younge for his kindly assistance and courtesy.



G. A VANDRY,
President Quebec Branch, 1904-05.



WM. MARSH,
Vice-President Quebec Branch, 1904-05.

NEW MEMBERS

Passed by Executive Council, July 20, 1904

Dartmouth, N.S.

ATLANTIC FOUNDRY—Hot Water Boilers, Soil Pipe and Fittings, Stoves.

Hamilton, Ont.

THE T. UPTON CO., LIMITED — Jams, Jellies, Orange Marmalade.

Montreal, Que.

THE IMPERIAL NECKWEAR CO.—Gents' Neckwear.

H. VINEBERG & CO.—Men's, Youths', Boys' and Children's Clothing.

H. G. VOGEL CO.—Automatic Fire Sprinklers and Appliances.

New Westminster, B.C.

THE VANSTONE HEATING & PLUMBING CO., LIMITED—Heating Apparatus.

Quebec, P.Q.

THE LOUIS GAUTHIER COMPANY—Shoes.

Sherbrooke, Que.

THE MOORE CARPET CO.—Carpets and Rugs.

Toronto, Ont.

BERRY BROTHERS, LIMITED—Varnish.

CLYDESDALE STOCK FOOD COMPANY—Animal Foods and Veterinary Preparations.

DOMINION SHOW CASE CO.—Floor Cases and Fittings.

THE FORBES ROOFING CO.—Roofing Cement.

THE MCLACHLAN GASOLINE ENGINE CO., LIMITED—Gasoline Engines.

THE NEWS PUBLISHING CO., OF TORONTO, LIMITED—Newspaper.

STANDARD CAP CO.—Cloth Caps.

A. J. STEWART, LIMITED—Fine Chocolates, Confectionery and Bon Bons.

THE HAROLD A. WILSON CO., LIMITED—Sporting Goods.

Woodstock, Ont.

THE WOODSTOCK CEREAL CO., LIMITED—Oatmeal, Rolled Oats, &c.

THE ASSOCIATION LIBRARY

The National Municipal League of the United States has printed in booklet form the annual report of the Secretary, Clinton Rogers Woodruff, read at the Chicago meeting of the League. Under the title "A Year's Disclosure and Development" he gives a brief summary of the municipal scandals exposed and convictions secured in the principal cities of the United States during the past year, and recounts the progress made in the direction of good civic government. The tone of the report is very optimistic, and shows that the interest of electors in the movement towards intelligent and effective self-government has been greatly stimulated.

The sixth edition of the American Trade Index, issued annually by the National Association of Manufacturers, has just made its appearance. This book has become a standard work of reference as regards United States manufactures generally, and will be eagerly sought after by large buyers of the goods of that country. The present edition, comprising 12,000 copies, is printed in English, French, German and Spanish, and contains over 700 pages of classified information.

Too much praise cannot be given to the enterprising publishers of *The Commercial*, Winnipeg, for the splendid success of their Dominion Exhibition Number. It is a handsomely bound issue of 120 pages, containing in addition to the regular features, a number of interesting articles dealing with the resources of Manitoba and the Western Provinces, and the wonderful development they have undergone in the last twenty years. The cover design has for its central figure a brawny son of the prairie, represented as pouring into the granary of the Empire bag after bag of No. 1 hard,—the world's best. It is a matter of considerable satisfaction to know that the publication of such a creditable number by a paper depending almost entirely for its support on the people of the West, is at all possible, reflecting, as it does in a striking manner, the growth and prosperity of that portion of our country.

WORLD'S GREATEST LIFT LOCK

Formal Opening of Hydraulic Lift Lock at Peterboro. Some Interesting Facts regarding its Construction and Operation.

AN event of national importance was celebrated at Peterboro on July 9th last, when the immense hydraulic lift lock of the Trent Valley Canal was formally opened for traffic by the Hon. H. R. Emmerson, Minister of Railways and Canals.

The completion of this lock opens the canal for continuous navigation from Heeley's Falls on the Trent River to beyond the



shores of Balsam Lake, a distance of 126 miles. The construction of the superstructure of the hydraulic lock situate between Lake Simcoe and Balsam Lake, which is now well under way, will afford direct communication through to Lake Simcoe. To open the whole waterway from the Upper Lakes to the St. Lawrence all that remains to be done is the outlet from Lake Couchiching into the Georgian Bay, the canalization necessary on the lower Trent, and the outlet into the Bay of Quinte, so that the completion of this long deferred and much needed public work would now seem to be well within sight.

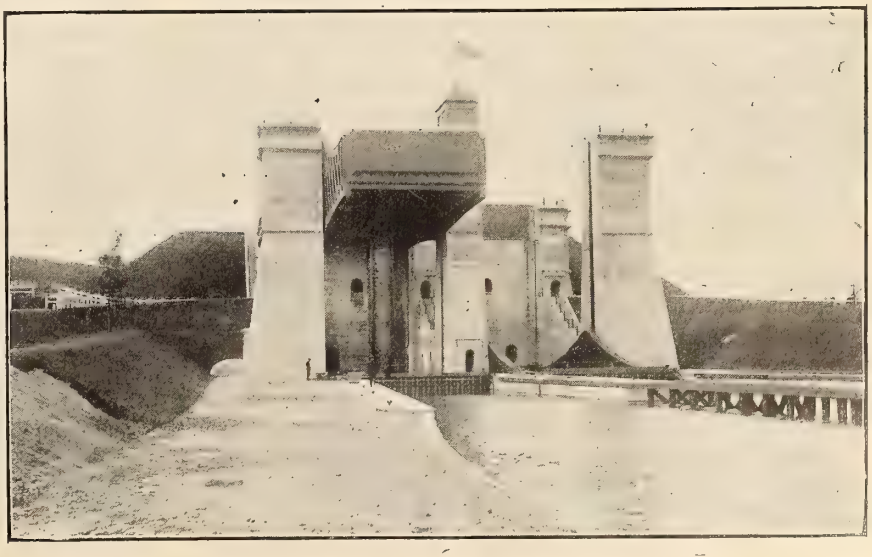
The hydraulic lift lock at Peterboro is a work of which Canadians may well feel proud. Not only is it the first to be built on the American continent, but it is the largest lock of the kind in the world. It has been designed throughout by Canadian engineers, and constructed almost entirely of Canadian material, and its successful operation constitutes a distinct triumph for Canadian skill and Canadian industry.

It was built to overcome a gradual fall in the waters of the River Otonabee extending over a stretch of four miles. The total difference in elevation is 77 ft., of which the lift takes care of 65 ft., the remaining 12 ft. being overcome by a lock of the ordinary type at the debouchement of the canal into Little Lake.

Work on the lock was begun in 1896, so that it has been nearly eight years in building. By 1899, when the excavation was completed, over 120,000 cubic yards of earth had been removed. In 1900 the substructure was commenced. It is built entirely of concrete, and is said to be the largest mass of monolithic concrete in the world. It contains over 26,000 cubic yards, and an equal number of barrels of cement were used in its construction. Most of the cement was purchased from the Rathbun Co., of Deseronto; the rest from the Owen Sound and Lakefield Portland Cement Companies. The steel superstructure was manufactured by the Dominion Bridge Co., of Montreal, who originated many of the details adopted by the engineers in charge. The immense rams were built by John Bertram and Sons, Dundas. They are 7 feet 6 inches in diameter, and have a working stroke of 65 feet—the largest ever built. As shown in the illustration, the lock is built in two sections, so that a boat may be lowered in one chamber at the same time that one is being raised in the other. The hydraulic pressure in the presses during operation is 600 lbs. to the square inch. The chambers are built of steel plates and are 140 feet long, 33 feet wide, and 9 feet 10 inches deep. They contain a volume of water weighing roughly 1,300 tons, or about equal to the combined weight of 13 locomotives. The outside guide towers rise to a height of 100 feet, while at their base they measure 26 feet 6 inches by 40 feet 8 inches. The breast wall of the lock is 80 feet high, 40 feet thick, and 126 feet at the base. The total cost of the lock will be about $500,000.

The lock will accommodate a barge 123 feet long and 32 feet 10 inches beam. On the maximum draft of 8 feet a vessel of these dimensions will carry 25,000 bushels of wheat; on 6 feet, 18,000 bushels; and on 5 feet 15,000 bushels. The time occupied by lockage is 12 minutes, though the actual vertical motion is accomplished in one and a half minutes. The movement is said to be absolutely noiseless. So nicely have things been calculated, so accurately have all the adjustments been made, that the operation of the lock is without a jar or tremor of any kind.

Compared with the ordinary type of lock, the lift lock possesses many advantages. It is capable of overcoming a much greater elevation, it performs this duty in much less time, and affords unequalled facilities for handling traffic expeditiously and avoiding a congestion. Under the circumstances existing at Peterboro, it is estimated that at least five double locks of the ordinary type would have been required. These could not have been built without entailing a much greater outlay, and their cost of operation would always have been high on account of the large number of men needed to man them. The service, moreover, would have been slower, and subject to frequent interruptions.



Transportation Department

THE Board of Railway Commissioners, the Hon. A. G. Blair, Chief Commissioner, the Hon. M. E. Bernier, Deputy Commissioner, and Dr. James Mills, Commissioner, opened court for the hearing of railway cases in the Chamber of High Court of Justice, in the Municipal Buildings of Toronto, on June 20th. The sittings lasted to and including June 29th. A variety of cases were heard by the Board, including question of crossings, obstructions and other matters relating to the operations of railways and a number of complaints of more or less importance regarding excessive rates, discriminatory rates, etc. The question of Canadian Freight Classification No. 12 was also discussed and a compromise settlement effected on a temporary basis. The Board was accompanied by the secretary Mr. A. D. Cartwright and by Mr. James Hardwell the newly appointed Traffic Official. Below is a summary of the various cases presented before the Board by the Transportation Department of the Association.

SYDENHAM GLASS CO. V. GRAND TRUNK, CANADIAN PACIFIC RAILWAYS, &c.

For the Sydenham Glass Co.—Mr. D. A. Gordon and Mr. W. H. D. Miller. For the Railways—Mr. A. Patriarche, General Traffic Manager, Pere Marquette System (Lake Erie and Detroit River Railway); John Pullen, General Freight Agent, Grand Trunk Railway; G. M. Bosworth, Fourth Vice-President, Canadian Pacific Railway; B. B. Mitchell, General Freight Traffic Manager, Michigan Central Railroad; F. F. Backus, General Freight Agent, Toronto, Hamilton and Buffalo Railway.

This case has reference to an advance in rates upon glassware from Wallaceburg to Toronto and Montreal. Until recently the Canadian Pacific Railway, in conjunction with the Lake Erie and Detroit River Railway (Pere Marquette System) conceded by voucher special rates to the Sydenham Glass Co., to Toronto C.L. 15 cents and L.C.L. 23 cents, to Montreal C.L. 21 cents, L.C.L. 32 cents. In his remarks before the Board Mr. Gordon stated that the railways had cancelled these rates, waiting to see what action would be allowed by the Commissioners.

This complaint involved a consideration of the importations from the United States and Germany and the rates applicable thereto.

It was thought desirable to limit the consideration of the question to the rates to the principal eastern markets for the output of the Sydenham factory, viz.: Berlin, Hamilton, Toronto, and Montreal.

At the suggestion of the chairman, the Hon. A. G. Blair, the discussion was further limited by the elimination of winter rates and by cutting out of the question all commodities other than glass bottles; glass bottles representing the great bulk of the output of this factory.

From Wallaceburg:

To	Mileage		Rates C.L.	Rates L.C.L.
Berlin	138		19	29
Hamilton	160		19	29
Toronto	199	current special	18	..
		tariff	20	30 cents
Montreal	532	current special	25	38 "
		tariff	30	45 "

C.L.—Carloads. L.C.L.—Less than carloads.

From Gas City, Indiana, the distances are: to Berlin, 536 miles; Hamilton, 553 miles; Toronto, 592 miles; the rate, carloads only, to Hamilton, Berlin and Toronto, 17½ cents.

Chicago to Toronto, 508 miles, the carload rate is 18 cents.

From Detroit to Berlin, 170 miles; Hamilton, 189 miles; Toronto, 228 miles; Montreal, 561 miles; the rates are to Toronto, Hamilton and Berlin, 13 cents, and to Montreal, 23½ cents for carloads. For less than carloads the rate from Detroit to Toronto, Hamilton and Berlin is 23 cents and to Montreal 42½ cents.

From Pittsburg to Berlin (374 miles), Hamilton (341 miles), and Toronto (380 miles), the carload rate is 18 cents and to Montreal (674 miles) 25 cents.

The import rates are—Montreal to Toronto, 13½ cents; Hamilton, 15 cents; Berlin, 15 cents.

The attention of the commissioners was directed to these discrepancies in rates, more particularly the discrepancies in the rates from Gas City, Indiana, and Detroit.

Mr. Bosworth defended the Canadian rates on the ground that there was no competition, as no shipments are made into Canada from Detroit or Gas City. Mr. Bosworth stated further that out of the 18 cent rate from Wallaceburg his company would receive but 9 cents from St. Thomas which would not figure out as favorably to his company as a 13 cent rate from Detroit.

In reply to this statement, Mr. Miller drew the attention of the Board to the fact that the same 13 cent rate from Detroit would apply by Grand Trunk or Canadian Pacific, direct line, or in connection with the Michigan Central Railroad to St. Thomas, thence Canadian Pacific Railway. In the latter case, the earnings of the Canadian Pacific Railway would not exceed possibly 6½ cents per one hundred lbs.

Mr. Bosworth made some explanation of the expenses of transportation, assigning to terminal work the great bulk of the rate, but this explanation was not effective because not sufficiently explicit.

Mr. Bosworth also made an effort to show that the 13½ cent. import rate from Montreal was reasonable, by explaining that it was a proportion of a through rate from Germany.

He stated that the Carling Company, of London, purchase their bottles in Germany because Wallaceburg bottles will not stand the heat test. In response to this statement, Mr. Miller replied that authorities seem to differ, since he had the assurance of a prominent brewer in Toronto that the bottles "made in Canada" are superior to the German bottles, being more regular in shape; not thick in places and thin in other places, as are frequently the German bottles.

Questions were asked by the Commissioners for the purpose of eliciting information, but these questions were not responded to by the railway representatives in an altogether satisfactory manner.

Mr. Bosworth spent some time to show that there was no competition between Detroit and Wallaceburg with regard to glassware, and argued that no undue disadvantage could exist where there was no competition.

Mr. Miller, in conclusion, explained, in reply to a question from the Honorable Mr. Blair, that the rate was not one established by water competition. The water is in both places, but is not used in the sense of being a competitor for the business. The question is not one of long and short hauls. It is a question as to the fairness of the rate from Detroit to Toronto on 5th class goods including bottles (Official Classification), a distance of 228 miles of 13 cents, as compared with the rate from Wallaceburg to Toronto on 5th class goods (Canadian Classification), a distance of 199 miles, of 18 cents, or regular tariff, 20 cents; and relatively in the case of Montreal.

The Government returns were quoted to show the increased value of importations of glass carboys, demijohns and bottles from $181,582 in 1898 to $324,482 in 1903 ; jars, chimneys and shades from $274,233 in 1898 to $408,700 in 1903; other items of glassware from $151,000 in 1898 to $330,000 in 1903 ; the proportion coming from the United States in 1903 being $592,000.52. Glassware, carboys, demijohns, bottles, etc., from Germany increased from $65,066 in 1899 to $167,000 in 1903. Other glassware from $27,000 (roughly) in 1899 to $57,668 in 1903.

Mr. Gordon gave some information regarding the assembling of raw material at Wallaceburg.

SUTHERLAND-INNES CO., OF CHATHAM, WALLACEBURG COOPERAGE CO., OF WALLACEBURG

The next case on the list was the application of the Sutherland-Innes Co., of Chatham, and the Wallaceburg Cooperage Co., of Wallaceburg, for a restoration of a rate of 16½ cents per one hundred lbs., conceded for a number of years upon cooperage stock from the mills in Ontario west of London and St. Thomas, to Montreal for local delivery or exportation ; these rates including in the case of exported material the terminal charges at Montreal, and in the case of cooperage for local consumption the cost of delivery to local consignees.

Mr. D. A. Gordon appeared for the Wallaceburg Cooperage Co., Mr. W. M. Fleming for the Sutherland-McInnes Co., and Mr. W. H. D. Miller for complainants generally on behalf of the Association. The same representatives appeared on behalf of the railways as in the preceding case.

This complaint was divided into two sections—one relating to the discrimination against cooperage stock in certain specific lumber tariffs, that is, tariffs which quote specific rates between specific points, as distinguished from the mileage lumber tariffs which have a more general application.

The mileage lumber tariffs of the Canadian roads, also some of the specific tariffs, authorize the application of the same rates on cooperage stock and lumber. As a general matter of classification lumber and cooperage stock are similarly classified.

The specific tariffs of the United States lines applicable to export business, and to business into Canada, authorize the lumber rates upon cooperage stock. Values of lumber and cooperage stock were handed in as evidence to show this similarity of the commodities. Complainants stated that cars can be loaded, except in the case of hoops, quite as heavily as in the case of lumber. All classes of lumber will not load to the full capacity of the car.

The second phase of the question considered the increase in the rate for local consumption from 16½ cents, including delivery, to 18 cents, exclusive of delivery ; and for export from 16½ cents including Montreal terminals, to 19½ cents, including terminals. The rate of 16½ cents per one hundred lbs. was in force openly or on the rebate system for many years.

It was contended that this rate was fair and should be restored, and a rate statement handed in to show that for longer distances relatively lower rates are applied from United States points.

From Detroit to Montreal for export the 6th class rate is 17½ cents, the distance being somewhat greater than from the Canadian cooperage milling points. From Detroit to Baltimore for export the rate is 16½ cents, although the distance from Canadian points to Montreal is considerably less than the distance from Detroit to Baltimore. The rate from Bay City, Saginaw and Milwaukeee to Moutreal, for a distance somewhere around 609 miles, is 19 cents per one hundred lbs., while the average distances from the Canadian cooperage mills, from which a 19½ cent. rate is charged, is 500 miles.

In the west-bound lumber tariffs of the Canadian Pacific, cooperage is quoted on the lumber basis, and the rate from Montreal to Windsor is only 15 cents per one hundred lbs., against the east-bound rate of 19½ cents for export, and 18 cents for local consumption.

Some time was devoted to the consideration of the lumber tariffs of the Canadian Pacific and Grand Trunk railways from points north of Orangeville and Guelph, from which points to Montreal the lumber rate is 15 cents per one hundred lbs.

For general class traffic to Montreal the rates are the same from north of Orangeville as from west of London, the railways probably arguing that a greater expense of operating the northern lines offsets the longer haul from the territory west of London.

If the Association argument sustains the contention that the rates should be the same upon lumber and cooperage stock, and originally they were the same for both commodities from this northern country, with a special exception of Montreal (an exception that has not been reasonably explained), then based upon the equality of class rates from the two sections of the province, it is fair to argue that the rate upon cooperage stock should not be higher from west of London than the rate upon lumber from the Owen Sound section: 15 cents per 100 lbs. to Montreal. This would be a fairer rate than the present figure, and would fall in line with the west-bound rate from Montreal referred to above and the rates quoted from Detroit and the lumber and cooperage mills of central Michigan.

The statement was made personally by the complainants that their export business is falling off owing to the increase in rates, and that now cooperage stock, which was formerly shipped to England from points in Western Ontario, is being shipped from mills in Indiana and Louisiana, in the former case, through Philadelphia, Baltimore and New York, in the latter case, through New Orleans.

It was contended that the time for advance in the rates was inopportune. The gradual clearing up of the country west of London results in steady decrease in the volume of available cooperage timber, and a steady increase in the price of the logs at the cooperage factories. The delivered prices in the markets of Montreal and England do not necessarily undergo a proportional advance, because these markets can be supplied from other places where the country is still in a backward state of development, where the raw material can be purchased cheaply.

The tendency should be to maintain, or to reduce, rather than to raise, freight rates in the face of this increasing expense of operations.

The result of this increase in rates is also tending to displace cooperage stock in favor of cotton bags at the Montreal flour mills and refineries.

Mr. John Pullen, representing the Grand Trunk, replied. He admitted the inclusion of cooperage stock on many of the lumber tariffs and the similar classification of lumber and cooperage stock, but claimed that the similarity of classification was not sufficient ground work upon which to build an argument in favor of a universal equality of rates upon the two commodities. To sustain his argument, that a classification relationship does not establish the analogy of freight he referred to nails and sugar, which are classified 5th class in carloads, but upon either of these commodities rates may vary as compared with the rates upon the other. He admitted the occasional issue of specific lumber tariffs which do not include cooperage stock and that certain of these tariffs at one time did include cooperage stock. Because cooperage stock is on the lumber basis in the United States, he held to be no reason why it should be included upon the same basis here. He urged commercial or competitive conditions as establishing a basis upon which these commodities should be rated. "Otherwise," said Mr. Pullen, "if we were to follow the United States practices we would have United States railway men dictating what rates the shippers in Canada should pay."

The railways put in evidence as to the comparative value per car of cooperage and lumber, showing that 30,000 staves would be valued at from $300, to $330, while 12,000 ft. of lumber at $15 per

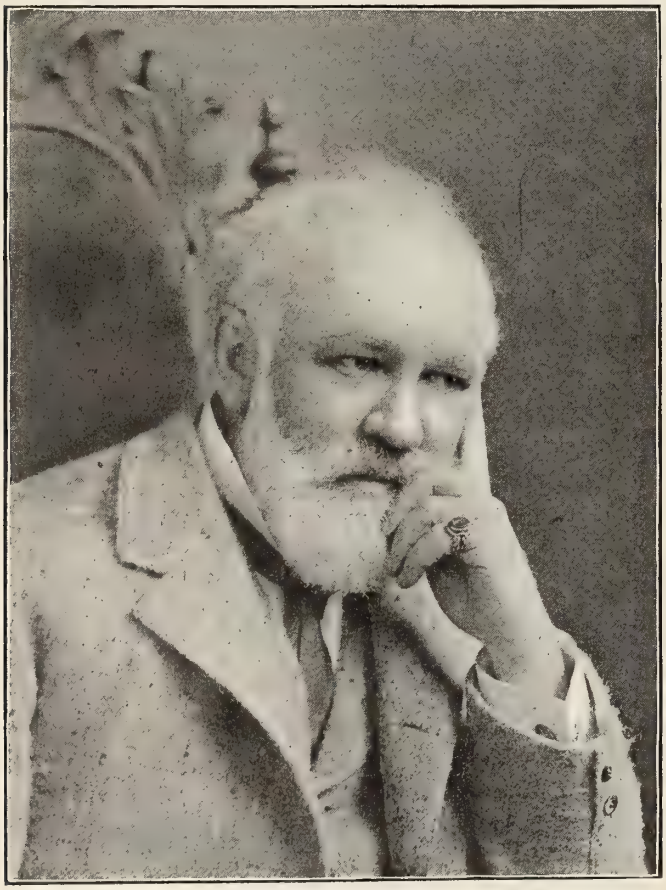
thousand would be worth but $180, using this as an argument to justify the higher rate on cooperage stock. These figures are erroneous and will be dealt with hereafter.

The railways also referred to the increase per thousand in the value of staves from 1898 to 1904, the prices being for various years :

1898	$6.30 per thousand
1899	7.50 "
1901	7.80 "
1902	9.00 "
1903	9.00 "
1904	10.00 to $11.00 per thousand

This shows an increase in price, the railways state, of 74.6%. These statistics will also be dealt with later on.

Mr. Pullen submitted figures to show that in 1896 cooperage was on an 18 cent basis, the rate being reduced in the following year to 16½ cents, upon which basis it was continued until 1902, varying since that year from 18 to 19½ cents, with sometimes both



HON. A. G. BLAIR,
Chief Commissioner.

rates at once, according to the service performed. He pointed out that these rates were subject to deductions on account of Montreal terminals ; in the case of exports, 2.85 cents per one hundred lbs., reducing the maximum net rate in the period, to 16.65 cents and the minimum net rate to 13.65 cents. The railways pointed out that the rate of 19½ cents applying from Chatham to Montreal for export was the rate applicable also from Chatham to New York.

In the cross examination, Mr. Pullen added that the railways considered higher rates upon cooperage were justified by the lesser volume of that commodity as compared with lumber.

On behalf of the complainants, Mr. Miller replied to Mr. Pullen's remarks. Mr. Pullen's reference to the classification of sugar and nails was not appropriate to the case because, outside of the fact that they happen to fall within the same classification rating, they are not related to each other as are cooperage stock and lumber. It is the practice in Canada to establish a list of commodities, entitled to certain rates, for example, a list of iron commodities taking iron rates, flour and grain commodities taking flour and grain rates, and lumber and commodities that take lumber rates. The mileage tariffs universally apply to both lumber and cooperage stock, sometimes also the specific tariffs. The comparative values and other arguments advanced should make the application of the same rates universal. He urged that no one could dispute the relationship between cooperage stock and lumber, neither of which has passed so far from the original log as to have completely lost its identity with the raw material from which it was manufactured.

The classification establishes but an imperfect relationship between commodities, the relationship of values, mass, bulk, fragility, or the convenience with which goods can be transported, and, to some extent, volume itself. The classification in this case was urged merely as an argument, and not as a controlling reason.

Mr. Pullen argued that the railway tariffs are made with a full knowledge of commercial conditions, a point which many manufacturers and shippers can reasonably dispute. With respect to the dictation from United States railway men as to what rates should be applied in Canada, Mr. Miller stated that we would not be any the worse off with this dictation, as possibly on the intermediate hauls, at least, our rates would be on the more reasonable U. S. rate basis.

The complainants' statistics with regard to the comparative values of lumber and cooperage stock were obtained in the former case from the *Canadian Lumberman* of May 11th, which was submitted as evidence. The average cost of the cooperage stock was obtained from the manufacturers. Mr. Pullen estimated the average value of lumber at $15 per thousand, while the average value of pine lumber in Toronto, taking the complete output of a pine mill, high, low, and intermediate grades together and averaging them, is, it is stated upon good authority, $17 per thousand.

This does not take into account the greater value for hardwood lumber, which in the case of oak or walnut, would run into comparatively large figures.

Evidence was submitted on behalf of the complainants to show the enormous increase, already alluded to above, in the cost of raw material, the logs at the mill in 1897 being worth $7.80 per thousand, log measure, the prices increasing by successive steps until this year the manufacturer was paying $17 per thousand, log measure. The increase in contract prices of cooperage stock was otherwise due to the increase in the freight rate.

The argument of the railways that volume should be a factor in establishing rates was converted by Mr. Miller into an argument in favor of the low rate upon cooperage stock where this traffic represents the volume of the manufactured forest products from this particular locality.

The terminal charges which the railways referred to as reducing their earnings under the Montreal rate, were shown to apply to a greater degree in the case of the New York and Philadelphia rates, in the former case running from 3 to 4 1-5 cents and in the latter to 3 cents.

It was contended on account of the closer proximity of these cooperage milling points to Montreal, their natural port of export and home market, that the rates should be on a lower basis, mileage considered, than from United States points. The rate of 16½ cents per one hundred lbs. from Detroit to Baltimore should not reasonably be exceeded from intermediate Canadian points to Montreal in consideration of the shorter distances to Montreal.

The railways urged the increased cost of operation, which the Association claims requires investigation. The Association contends that the cost of transportation of one ton of freight one mile, which is the unit of measurement by which the expense of transportation is gauged, cannot have increased during the past years in the face of the increased volume of traffic to-day, and the improved facilities by means of which railway tonnage is handled.

Mr. Pullen contended that Mr. Miller had an advantage in that he had the opportunity of considering overnight the railway companies' reply referred to above, and urged that it was only right that the Board should allow the railways an opportunity of preparing a reply "with respect to Mr. Miller's additional, elaborate mass of technical information." After securing this opportunity of preparing a reply, the railways returned to the Board and, in a written statement, expressed themselves: "Aside from the expression of a number of opinions of his own, the value of which we are quite willing to leave to your honorable Board, we find in his statement (Mr. Miller's), no new facts calling for explanation on the part of the carriers." Instead of making any further reply to the contentions advanced by the Association, Mr. Pullen confined himself to a consideration of the basis of making east-bound rates from Chicago, explaining that some time in the past (the date was not given), the basis of rates from Detroit east-bound to New York, was 84 per cent. of the Chicago east-bound rates, and that owing to the commercial rivalries between Detroit and Toledo, the latter enjoying the 78 per cent. basis of rates, the railways were obliged to concede the same basis, in spite of a longer mileage, to the shippers of Detroit. In a later argument this reply of the railways was considered, and the attention of the Board directed to the absence of dates, and to the fact that possibly the commercial rivalries of Detroit and Toledo had not so much to do with the reduction in the rates from Detroit as the inauguration of the Michigan Central through service, with its short mileage via the Canada Southern Railway. It was also pointed out that the same basis of rate is appplied from Port Huron as from Toledo and Detroit, and that Port Huron could hardly have been subject to the same commercial rivalry as Toledo and Detroit.

THE TOWER CANADIAN OILED CLOTHING CO. V. THE CANADIAN PACIFIC RAILWAY

For complainants, Mr. W. H. D. Miller; for Canadian Pacific Railway, Mr. W. R. MacInnes.

Application made in February last for a carload rate upon oiled clothing from Toronto to Calgary. The application was declined by the Canadian Pacific Railway, the only argument urged against it being that the classification does not provide carload rates for this and some other commodities. The argument of the Association before the Board was that as common carriers, railways are guilty of unjust discrimination in conceding to one party a carload rating and declining to concede it to another, this although the parties may not be in the same line of business or in competition with one another. The cost of transportation of carload shipments is less than the cost of transportation of less than carload shipments, and it is the duty of common carriers to gauge the price of their wares (transportation) by the expense of the service performed.

Evidence was submitted to show to what extent the classifications of the United States have been modified during the past 17 years by the adding of carload ratings for commodities which were not formerly provided with such. In the case of Official Classification there were only 44.93% of the commodities covered by that classification in 1887 provided with carload rates, while in 1902, 81.61% have both carload and less than carload ratings. The Western Classification figures are respectively 44.7% and 77.9% and the Southern Classification 17.93% and 65.61%.

THE ALMONTE KNITTING CO., V. THE CANADIAN PACIFIC RAILWAY

For complainants, Mr. W. H. D. Miller. For Canadian Pacific Railway, Mr. W. R. MacInnes, Freight Traffic Manager.

The complaint has reference to rates on coal from Buffalo and Suspension Bridge to Almonte, a town seven miles north-west of Carlton Place, on the main line of the Canadian Pacific Railway. The rate charged to this point is $2.40 per ton, while to Ottawa, 27 miles north-east of Carlton Place, the rate is $2 per ton, this Ottawa rate applying also to intermediate points. The rate is also $2 per ton to Montreal for much greater distances, and points intermediate to Montreal take the same rate of $2 per ton.

The rates from Prescott and Brockville to Carlton Place and Almonte are the same, and from Detroit to Almonte is 10 cents per ton higher than from Detroit to Ottawa.

PEA MILLERS' COMPLAINT

Millers: Walter Thomson & Son Ltd., London and Mitchell; H. Murton, Guelph; Jas Wilson & Son, Fergus; Tilsons Co. Ltd., Tilsonburg; Woodstock Cereal Co. Ltd., Woodstock.

This complaint was heard on the morning of the 28th of June, Mr. Miller again appearing for the Association, of which these various millers are members.

The complaint originated about a year and a half ago. Up to that time, the railways published, upon export business, the same rates for split peas as for flour and other cereal products. The trade was almost exclusively an export one, principally to Great Britain.

A party in Port Huron, Mich., who was shipping to New York or elsewhere in the United States for local consumption (it is understood that the United States split peas are used locally and not exported) laid an informal complaint before the Interstate Commerce Commission of unjust discrimination as between the rate charged to New York from Canada–at that time 13½ cents per one hundred lbs.—and the rate charged from Port Huron, 23½ cents.

Having been cited to appear in Washington, the Canadian railways, instead of considering the purpose for which the Canadian and United States products were being shipped, raised their Canadian rate, so as to do away with the United States complaint.

As a result of the advance in the rates, the millers of split peas were completely shut out of the British market, and since that time the shipments have been practically nil.

After allowing the matter to stand upon the advanced basis, first published, for some time, the Canadian roads attempted to recognize the disadvantage of the pea miller by reducing the discrepancy between the rate upon split peas and the rate upon flour to three cents per one hundred lbs. The pea miller claims that it is impossible to do business even on this basis.

His competition is partially German. It is supposed that in Germany the industry is bounty fed. The German export freight rates are preferential, and the market in Germany for offal is exceptionally good. The Canadian manufacturer is placed at such a disadvantage with respect to German competition as to make it impossible for him under present conditions to do business.

Again, the Canadian peas shipped in bulk to Liverpool and London in cargo lots, at low bulk grain rates, are taken by the millers of London and Liverpool and the good pea separated from the inferior or buggy pea, from which former the British miller manufactures split peas. The British miller has the advantage of freight rates from Canada, the bulk grain rates being lower in the majority of cases than even the flour rates, and an additional advantage of a good market for his by-product.

The capital invested in the Canadian pea mills is practically idle and useless. Canadian labor is displaced.

Evidence was handed in to show the extent to which the change in the rates has crippled the operations of these mills, and other statistics to show that split peas are heavier and less valuable than flour.

Mr. J. W. Loud, Freight Traffic Manager of the Grand Trunk Railway, stated that the difficulty was due to the objections raised by the millers of Michigan and stress from the United States roads who were able to bring influence to bear upon the Canadian roads. It was also stated by the railways that the difficulty was not altogether one of rate but of the fact that the peas are buggy which prevents the splitting for exportation.

Mr. Bulling for the Canadian Pacific Railway stated that he had it from a leading miller that German competition was not a factor and that the competition was really with the Canadian peas shipped in bulk and split in England.

In respect to this statement, Mr. Miller pointed out that it was all the more necessary that the rate upon split peas should be adjusted by the Canadian roads to enable the millers to do the business.

In reply to Mr. Bulling's statement that German competition was not a factor, a letter was read by Mr. Miller from an English correspondent of one of the millers who stated that "The peas are coming in partly from Liverpool, but in larger measure from Hamburg. The mills are producing both kiln dried, dry dressed and also the Liverpool style of polished at the same price. As there is a direct service from Hamburg to England weekly, this favors the British buyers for the reason that they have not to take a large quantity at once, but could get regular supplies fortnightly and monthly." This party, whose letter was dated June 13th, 1904, added—" We do not think that the peas were quite as good as you shipped out, but they came in for ordinary requirements, and we expect that a good share of the trade will go there (to Hamburg) this year, unless the Canadian market can show some distinct advantage."

It was urged for the complainants that the Canadian pea is improving in quality which will make it possible and also necessary to enlarge the splitting operations.

The United States millers have a large home market for their product, while the Canadian miller is bound to export and it was pointed out that it was only with regard to this export business that complaint is made.

The railways urged that a difference of 3 cents per one hundred lbs. on split peas should not prevent the miller getting into the British market, overlooking the fact that a margin of 3 cents per one hundred lbs. is a serious factor in a business of this nature.

A good deal of cross-questioning found its way into this discussion and Mr. D. R. Ross, of the Woodstock Cereal Co., was invited to reply to questions that might tend to clear up the case. The replies made by Mr. Ross to the various questions addressed to him were to the point, and established the injustice to which the millers of split peas are at present subjected.

DOMINION MILLERS' ASSOCIATION'S COMPLAINT AGAINST THE RAILWAY COMPANIES GENERALLY, REGARDING THE DISCRIMINATORY RATES UPON FLOUR AND GRAIN PRODUCTS FOR EXPORT.

Mr. C. B. Watts, Secretary of the Dominion Millers' Association, for the Association.

Mr. W. H. D. Miller, Manager Transportation Department of the Manufacturers' Association, for the Milling Section of that body.

Mr. W. R. MacInnes, Freight Traffic Manager, Canadian Pacific Railway, and Mr. W. B. Bulling, Assistant Freight Traffic Manager, for the Canadian Pacific Railway.

Mr. McGuigan, Manager of the Grand Trunk Railway and Mr. J. W. Loud, Freight Traffic Manager, appearing for the Grand Trunk Railway Company.

Mr. C. B. Watts referred to the economical conditions surrounding the exportation of all products and complained of the discrimination existing upon short haul, intermediate traffic, originating in Canada in favor of the longer haul traffic from the United States. The Grand Trunk and the Canadian Pacific Railways charge higher rates from Canadian points than they charge the millers and shippers in Michigan, although both these Canadian roads have received heavy bonuses of the Dominion and Provincial Governments. Figures were submitted by Mr. Watts to show the extent to which this discrimination obtains. The rate from Chicago to Montreal for export, a distance of 841 miles, is fixed at 13 cts.; from South Bend, 739 miles, 12½ cts.; from Lansing, 619 miles, 11½ cts.; from Port Huron, 504 miles, 9½ cts. The highest rate in Michigan being 12½ cts. and the extreme distance 716 miles.

As against these rates, the Canadian miller pays a rate of 11½ cts. per 100 from Windsor and intermediate points as far east as Whitby where the distances to Montreal range from 561 to 300 miles. The Grand Trunk charge from Toledo to Montreal is 9½ cts. or 2 cts. less than the rate charged from Whitby. The rate from Brechin to Montreal, a distance of 300 miles, is 13½ cts., while from Hart, Michigan, the rate is 1 cent per 100 less, and from Kincardine, Southampton and Wiarton, where the distance is in the neighborhood of 480 miles, the rate is 13½ cts. The Grand Trunk Railway goes further and accepts from its United States connections the same rates as they apply from their own Michigan Territory. Under which circumstance the proportion of the through rate accruing to the United States lines reduces the actual earnings to the Canadian road on business originating in Hart, Michigan, to about 7.8 cents.

Mr. Watts referred to the milling privilege given to the Michigan millers under which a stop over of 1½ cts. per 100 lbs. is made at the intermediate mill. He stated that the rate from the original point of shipment via the mill would be no more than the through rate to the seaboard from the original point of shipment of the grain.

Reference was made to the action of the Grand Trunk and the Canadian Pacific Railways, who, upon their attention being drawn to the low rate from Detroit to Montreal for export, cancelled the Detroit rate, as though this were a certain means of removing the discrimination. The Grand Trunk allowed the rate of 9½ cts. which they cancelled from Detroit, to remain in effect from Toledo, and 26 or more of these Michigan points from all of which points the business would be handled under less favorable conditions than from Detroit.

Mr. Watts expressed the opinion that it was not unfair to ask the railways to protect Detroit rates from Windsor or intermediate points. Reference was made to the fact that the same rate for export applied from Windsor to Montreal as from Detroit to St. John, N.B., but the Hon. Mr. Blair expressed himself that this would not be a very good argument as business is not forwarded to St. John in the summer season. Mr. Watts' response was that the same relative rates existed also during the winter.

Mr. Watts urged the importance to a dairying country like Ontario that the flour should be manufactured at home. The mill offal is essential for dairy farming that the best results may be produced.

The competition of the Canadian miller in Newfoundland and England is more directly with the millers of the United States, and if the United States miller has the advantage of freight rates, it necessarily means that he can afford to pay the farmer the highest price for grain. Mr. Watts pointed out that even a difference of ½c. a bushel would represent a considerable sum, as in the case in Ontario last year the farmers raised 135,000,000 bush. of wheat and oats.

Another complaint which Mr. Watts made in the interest of the Dominion Millers' Association was with respect to demurrage charges, contending that the system of the railways to-day is working out disadvantageously to the millers. If the railways are permitted to charge demurrage where the shipper is responsible for the detention, the same penalty charge should be paid by the railway companies where cars are not supplied promptly, delayed in transit or delayed in placing. This matter will be dealt with later, and more will be found in regard to the subject under the heading of classification.

Mr. Miller, on behalf of the milling section of the Canadian Manufacturers' Association, opened his remarks by referring to the statement made in a previous case by the railway companies in explanation of the east-bound rate basis from Chicago. He drew the attention of the Commissioners to the fact that whil

the commercial rivalry of Detroit and Toledo is given as the reason for granting a 78 per cent. rate basis from Detroit (the basis formerly being 84 per cent.), the same basis (78 per cent.) is applied from Port Huron, where the "commercial rivalries" argument would hardly apply. Mr. Miller stated that, in his opinion, it was probable the Michigan Central commencing to operate with a short route from Detroit to Buffalo over the Canada Southern Railway, that secured to Detroit the 78% basis, since the mileage from Detroit to Buffalo is much less than the distance from Toledo to Buffalo.

The following quotations from the decisions of the Interstate Commerce Commission as having bearing on the case were read. Opinion No. 488:—"Transportation charges are required to be relatively reasonable as well as reasonable in themselves, to prevent unjust discrimination between localities. A locality not widely dissimilar in situation, and in respect of the transportation service of the same character to other localities where lower rates are given, is entitled to rates that bear a just relation to the lower charges made.

Opinion 489, "Equality in charges is required under circumstances and conditions substantially similar and relative equality is necessary in the degree of similarity."

Opinion 490, "When a carrier engages in transportation for which, by reason of competitive conditions, or for purposes of its own, it receives low rates from some patrons, and at some localities, it accepts the legal obligation to give impartial service to other patrons and at other localities that sustain similar relations to the traffic."

Opinions 1011:—"Carriers engaged in the transportation of export flour from Minneapolis at a rate which is 1½ cts. less than the domestic rate, to the port of export, refuse to make any corresponding concession to intermediate millers. Held, that this is unjust, and unlawful discrimination against such intermediate traffic, and that whatever line participates in such lower export rate on flour from Minneapolis must make a corresponding rate upon similar traffic from intermediate points."

Opinion 1012:—"There may be instances where a carrier should be permitted to meet railroad competition without reference to its intermediate territory, but when the very existence of an important industry depends upon the carrier being required to treat intermediate territory as it does the more distant territory, the rule of no greater charge for the shorter distance clearly applies."

Mr. Miller urged that the distances from Canadian milling points were sufficiently low as compared with the distances from the milling points in Michigan to entitle the Canadian miller to as low and in some cases to a relatively lower basis of rates, than the rates from Detroit.

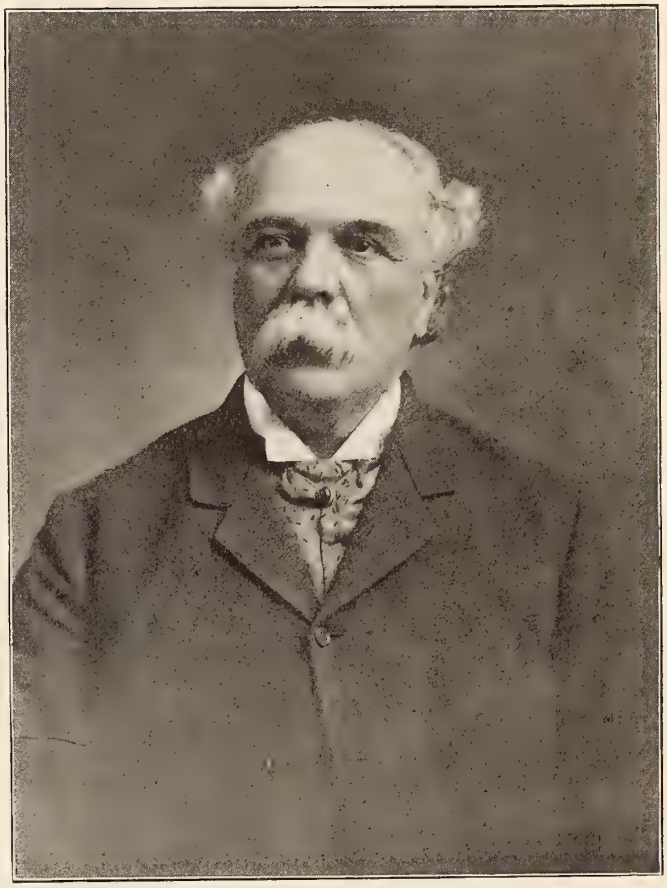
The following was also quoted from Prof. S. J. McLean's Report of 1902: "The low rate between Chicago and New York is undoubtedly attributable to the competing force of water competition. The railways' position is, in substance, that this competition is such as to cause them to make rates which would not pay if applied to all of their business. Attention is directed by the railways to the fact that this business is of advantage in that it adds to the prosperity of the railway, thereby enabling it to lower its rates in regard to local traffic."

"The Wabash cut the established rates to get business. This rate was a special rate for export. No tariff was published. An eleven cent rate has been also given for export from Canadian points over the Lake Erie and Detroit and Michigan Central."

"The Lake Erie and Detroit River Railway Tariff known as L. E. & D. Ry. I. C. C., No. 131, was issued December 5th, 1899, effective December 12th, 1899. This was a tariff on general merchandise and commodities from stations on the Lake Erie and Detroit River. Supplement No. 1 to this tariff, issued March 16, 1900, effective March 22, 1900, gave a rate of 11½ cents on car lot shipments of grain and flour, from stations on the Lake Erie and Detroit River Railway to New York for export. One day later, on March 23, 1900, Supplement No. 2, effective April 2, 1900, was issued. This placed the export rate to New York at 13½ cents. Evidence which it was impossible to corroborate, and which I do not therefore regard as conclusive, stated that the rate was raised at the instance of the Canadian roads. It is to be noted that no action either formal or informal was taken before the Interstate Commerce Commission or by the Commission as a result of which the increase was made."

"Public policy demands that when a low rate basis is given to American goods which come into competition with Canadian goods there should be regulation to see that the expansion of Canadian trade is not hampered. It should be seen to that Canadian goods are not given such a rate as to offset their geographical advantage."

Mr. Miller pointed out that when the discrimination in the Detroit rate was first brought to the attention of the managements of the Grand Trunk and Canadian Pacific Railways, when their



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attention was drawn to the fact that a rate of 9½ cents was applied from Detroit to Montreal for export, while the rate from intermediate Canadian territory was 11½ cents, the C.P.R. replied that the tariff was issued in error and enclosed a copy of a corrected issue. This position, as Mr. Watts stated, was also taken by the Grand Trunk at a later date, without taking into consideration the rates from points beyond Detroit. It would naturally be expected if there were anything objectionable in the rates from Detroit that the same objection would apply to the rates from the more distant points until Chicago is reached, in view of the fact that these points and Detroit are given rates which are supposed to be correctly related the one to the other and to the mileage which the traffic has to cover from these various points to the seaboard. While the rates were cancelled from Detroit the G.T.R. and C.P.R. did not take the trouble to request the Michigan

Central, Pere Marquette and other U.S. connecting railways which publish the same percentage system of rates, to cancel their rates from Detroit and west, which rates are still in effect.

Reference was again made to the economical condition surrounding the movement of flour and grain products, and the attention of the Commission directed to the fact that the English prices are established not by shipment from Canada alone, but by competition from various quarters. If the Canadian flour is hampered with an unjust rate system, even to the extent of 4 or 6 cents per barrel, it means that the farmer must stand the shrinkage or the grain must be diverted to other purposes. It was pointed out that while the rates which are applied from Central States points, including Michigan, to Montreal and Philadelphia, are 2c. per 100 lbs. lower, generally speaking, than the rates from the same points to New York, the United States miller has an outlet through the port of Baltimore for his product, on the basis of the differential under New York rate, generally speaking, of 3 cents per 100 lbs., so that the rate from Detroit to Baltimore, a distance considerably greater than the mileage to Montreal, is 8½c. per 100 lbs., as against 9½c. from Detroit to Montreal. The rate from intermediate Canadian territory is 11½c. per 100 lbs. to New York, Philadelphia, and Baltimore or Montreal.

The present differentials from interior United States points to ports of export was arranged in 1882. Under this differential system, generally speaking, Philadelphia has an advantage of rates two cents lower than the rates to New York and Baltimore. Three cents per 100 lbs. lower than New York. It will probably be found on examining these east-bound rates, that the percentage groupings have a reference to the average mileages from the principal shipping points of the group. This differential agreement is applied universally from the Central States, including Michigan, till the Canadian frontier is reached, when the basis is abandoned without any sufficient reason for stopping there, and the New York rates applied from Canada to all ports, so that while the rate from Detroit to Baltimore is 8½c., the rate from Windsor to Baltimore is 11½c.

As against this holding up of Canadian rates to all three United States ports, east-bound to the New York basis; on west-bound business the differentials are allowed to apply so far as the traffic destined to points in Canada between the Detroit, St. Clair and Niagara frontier is concerned. This means that while for first-class traffic from New York the rate would be 57c. per 100 lbs. to Canadian points east of Windsor and Sarnia to Niagara Falls, the rate from Baltimore would be 51c., from Philadelphia 53c. The moment you get off the main line of transit (take to Toronto for instance) the rate west-bound from Philadelphia and Baltimore, and from shipping points common thereto, are held up to the New York basis.

The question was asked what conditions established the dissimilarity of rates. If it is coal upon which the duty is to be paid by the Canadian roads, is it fair to tax the miller as high as $12 a car and sometimes higher, because of the small duty.

The attention of the Board was directed to the effect produced by the discriminatory system of rates upon the revenue of United States lines running east from the Niagara frontier. It is fair to assume that, from some at least, of the milling points between Detroit and Buffalo, the divisions accruing to the lines east of Buffalo would be precisely the same as those accruing to the same roads on the Detroit business. For the sake of securing for themselves a small additional revenue from the Canadian miller, the Canadian railways, by their system of rates, make it possible for the lines east of the Niagara frontier to earn more revenue per car when the traffic originates in Canada than when the traffic originates in Detroit or west. It is also pointed out that the proportion (on account of the longer mileage) accruing to the lines east of Buffalo, would represent the larger proportion of the rate.

Again, upon this export traffic some years ago, when the same rates as to-day were being applied, the minimum weights were in the neighborhood of 35 or 30 thousand pounds per car, to-day the export tariffs require that the car shall be loaded with barrelled flour up to 40,000 lbs,, and with flour in sacks up to the loading capacity, which might be 60,000 or 80,000 lbs., but not less than 35,000 lbs.

In this case, and in the case of cooperage stock, the railways have asked for the privilege of making a studied reply, in the defence of their charging higher rate from Canadian than from United States points. What this reply will be it is not possible to forecast. Whatever it is, it will be subject to the criticism of the Associations interested in this complaint. It is hoped the Associations will be successful in securing this measure of justice, an equality of rates for Canadian millers.

CANADIAN FREIGHT CLASSIFICATION

The preliminary argument of Thursday morning regarding Canadian Freight Classification was based upon the assumption that the Board might be in a position to consider the preparation and issue of a definite classification, or, at least, to make some arrangement looking to an early adjustment of the classification to a definite and fixed basis.

The argument of Thursday was confined to the rules and regulations of the classification.

First, to the rules of classification No. 12, in as far as they differ from the corresponding rules in classification No. 11.

Second, to the objection that the shipping public might entertain for those rules and regulations which have been carried from time to time, without change or any great modification, through successive classifications.

RULE NO. 1—MINIMUM WEIGHTS

Rule No. 1 of Classification No. 12 gives minimum weights for the various carload ratings of the classification. The Association made it plain that it does not object to the railways obtaining the most economical use of their equipment. What will bring this about will have the effect of lessening car shortages during the periods when traffic is offering so freely as to intensify, if a reasonable use is not made of car equipment, the car famine that exists during such periods. The Association takes exception to any increases in the minimum weights, in so far as those increases work to the disadvantage of the public. The Board was urged to give this question careful consideration. Shippers should not be forced, by the approval of Classification No. 12, to pay upon minimum weights exceeding the capacity of cars and thus have to pay on dead weight. Shippers should not have to overship the requirements of, and overstock, their country customers, or otherwise accept the only alternative—less than carload rates.

The principal objection to rule 1 centres around the minimum weights attached to light and bulky commodities. Under Classification No. 12, where light and bulky commodities are provided, in 36 foot cars, with minimum weights less 20,000 lbs., the basis for making the minimum weight for such property when 40 ft. cars are required, makes an increase on the 36 ft. minimum of as high as 100 per cent.: Examples, Bicycles, 36 ft, 10,000 lbs.; 40 ft. 20,000 lbs. Pianos and Organs, 36 ft. cars, 12,000 lbs. ; 40 ft. cars, 20,000 lbs. Furniture, Light Vehicles, etc., 36 ft. cars, 14,000 lbs. ; 40 ft. cars, 20,000 lbs. The classifications in the United States authorize more reasonable treatment of such commodities. In the Official and Southern Classifications the increase over the minimum weights for 36 ft. cars, (of commodities which take these low minima) when loaded in 40 ft. cars is 25 per cent., making the minimum for 40 ft. cars (based upon 10,000 lbs. for 36 ft. cars) 12,500 lbs., a saving as compared with the Canadian classification minimum, of 7,500 lbs. Upon property taking a minimum of 14,000 lbs. per car of 36 ft. in length, the Official and Southern Classifications make a minimum weight for 40 ft. cars of 17,500 lbs., a saving as compared with Canadian Freight Classification of 2,500 lbs. in the minimum weight It was urged that while these two United States classifications are more liberal in their treatment of light and bulky commodities in large cars, the

most reasonable, and at the same time the rational basis, is that authorized by the Western Classification, in which the 36 ft. car is taken to be the unit of car minimum, or the 100 per cent. car (100 per cent. for 36 ft. car is equal to about 3 per cent. per car foot), the minimum for larger cars is increased over the minimum for 36 ft. cars by 3 per cent. per foot of car length. Where property in 36 ft. cars takes a minimum weight of 10,000 lbs., the 40 ft. car of the same property would take a minimum of 11,200 lbs., an advantage in the Western Classification of 8,800 lbs. To impress the reasonableness of this regulation upon the Board, it was pointed out that the actual cost of transportation of a large car does not stand in the same proportion over and above the cost of carrying a 36 ft. car, as the longer car stands in proportion, (either in length or carrying capacity) to the 36 ft. car ; so that as against a saving in the expense of hauling the large cars in the trains and against the additional tonnage which these cars will carry, the railways actually disproportionately increase the mimimum weight with respect to these cars.

This Western (United States) Classification, which adds 3 per cent. per car foot for cars over 36 ft. in length, authorized another reasonable rule with respect to commodities of light and bulky nature loaded in smaller than 36 ft. cars, a deduction being allowed of 3 per cent per foot of car length for cars shorter than 36 ft. in length down to 91 per cent. of the 36 ft. car minimum. Thus the minimum weight for 33 ft. cars would be 9 per cent , and 34 ft. cars 6 per cent. lower than the minimum for 36 ft. cars.

At this point, it may be explained that following upon representations made by this department to the railways as far back as December last, the railways took into consideration the question of making their minimum weights for the large cars of light and bulky freight upon a lower basis. These minimum weights have been held in proof form in the (withheld) supplement to the classification, and now, when published, will give light and bulky property loaded in 36 ft. cars and taking the minimum of 10,000 lbs. or 12,000 lbs., a minimum weight of 15,000 lbs. when loaded in 40 ft cars ; for Furniture, Vehicles and such traffic for which a minimum of 14,000 lbs. is provided when cars of 36 ft. in length are used, the minimum, in the new rule, for 40 ft. cars, will be 17,500 lbs. This proposed rule, it will be observed, still shows up disadvantageously as compared with the Official, Southern, or Western Classification, in which the minimum for 40 ft. cars loaded with property, which in 36 ft. cars would take minimum 10,000 lbs., would be 12,500 lbs. in Southern and Official Classifications and 11,200 in Western Classification. On property in 40 ft. cars, taking in 36 ft. cars a minimum of 14,000 lbs., as compared with the proposed minimum of 17,500 lbs. for Canadian Classification, the minimum weight in the Western Classification is 15,260 lbs.

For reasons given hereafter, in the discussion following the suggestion that a temporary classification should be accepted, it was decided for the Association to accept temporarily these proposed reduced minima, leaving over for subsequent consideration the question as to whether the shippers of this class of traffic are entitled to minimum weights for the larger cars more in conformity with those authorized in the Western classification.

RULE NO. 2—MIXED CARLOADS

Rule No. 2 has reference to the privilege of mixing together in carloads property of various descriptions to obtain the benefit of a carload rate. Rule No 2 in classification No. 11 authorized the broad and generous mixing privilege that still obtains in the Official classification in force in the Eastern States that border on the manufacturing provinces of Canada.

Under rule No. 2, in classification No. 11, the shipper who had a mixed carload to forward was entitled to a carload rate on a mixed car if the various commodities of the mixed car were provided with carload ratings ; where the commodities were all rated the same in carloads, the same carload rating would apply. In classification No. 12 the railways introduced the principle, for mixed carloads, authorized in Western classification, although the Western classification conditions do not necessarily obtain in Canada. The principle adopted from the Western classification confines the mixed carload privilege to certain lines of trade. It is not for this Association to concern itself about the conditions that warrant, or do not warrant, a rule of this nature in the Western Classification (U.S.) territory, but it may be stated that the Board of Railway Commissioners of the United States have been making for several years past a strenuous effort to secure a uniform classification. It is believed that these efforts will ultimately and shortly be successful. When this uniform classification is agreed upon, it is not likely that a rule such as that of the Western Classification will be followed. It is not impossible to show that such a rule constitutes, when applied by corporations who are operating public franchises, and required to give equal consideration to all, an unjust discrimination against the party who is denied a mixed carload rating and in favor of the party to whom such a rating is granted. The railways as common carriers must adjust their rates to the service performed. Just as if the Government were in control of these lines, operating them for the people the principle would be a system of rates related, in some degree, to the expense of transportation. It has never been shown that the cost of carrying carload freight, whether mixed or all of one straight variety, is equal to the cost of handling similar less than carload shipments. It is reasonable that the railways should concede for carload shipments a rate that represents the advantage to them of transporting freight in such quantities. The plea which is advanced for this Western Classification system of mixed carload ratings is the interests of the jobber, but those interests, it is fair to assume, the interests of the community served would outweigh.

In connection with this rule and for reasons explained hereafter, the Association, as a temporary expedient, suggested this compromise ; that rule 2 (of Classification No. 12) based upon the Western Classification, with its restricted mixed carload privileges should be applied from points east to points west of Port Arthur and between points west of Port Arthur, and that rule No. 2 of Classication No. 11, the broader and more reasonable mixed carload privilege, should be restored upon all railways east of Port Arthur for traffic interchanged in that territory. This compromise, thanks to the assistance of the Board, was accepted and this privilege will again obtain in the territory east of Port Arthur, effective from the date upon which the classification and supplements are approved. On shipments between points east of Port Arthur, the manufacturer will not now be obliged to consider whether his various commodities fall under this distinctive heading or that distinctive heading ; or whether property under this or that distinctive heading can be mixed together for carload rates.

It is confidently hoped that when the classification is put in force on a definite and final basis that this broad basis of mixed carload rates shall be applied throughout Canada. While the compromise was suggested by the Association to break the deadlock, resulting in excessive charges for transportation to many members, it is not intended at all (and this point was made clear) that the Association gives its approval to the unjustly discriminating mixed carload privilege that is to apply temporarily to points west of Port Arthur and between points west thereof.

It is worth recording here the decision of the Interstate Commerce Commission upon the mixed carload question. This decision may have an important bearing upon the mixed carload classification in Canada. The decision is substantially that under the Act to Regulate Commerce the consignee is entitled to a mixed carload privilege like the shipper. In spite of the fact that consignees collect from more than one warehouse a mixed carload he is entitled on that mixed car to the same rating as if the property was manufactured and shipped from one warehouse. The railways are not entitled to look beyond the actual transportation. All that they are entitled to do is to insist that the property shall be on one

bill of lading, from one warehouse, on one day, to one consignor, and to one destination.

RULE NO 3—OVERPLUS OF CARLOADS

Rule No. 3 regulates the rate to be charged on the overplus of carload shipments, and excepts from its application, light and bulky freight taking minimum weights less than 20,000 lbs. and property in classes 6 to 10 inclusive. It was held on behalf of the Association that shippers of freight, which can be conveniently handled, are entitled to ship at the carload rate actual weight the excess of their one or more carloads so long as the property consists of freight that can be loaded, in 36 ft. cars, and loaded up to the minimum weight provided in the classification for such freight. Where the property cannot be loaded up to the minimum weight provided for it the shipper is not entitled to the privilege of shipping the overplus at the carload rate actual weight, but can reasonably be asked to pay upon the overplus the less than carload rate.



JAMES HARDWELL, TRAFFIC OFFICER,
Board of Railway Commissioners for Canada.

RULE NO. 8—RIGHT OF RAILWAYS TO REFUSE TO CARRY FREIGHT

Rule No. 8, it was contended, is not sufficiently explicit. It does not appear that any railway has the right to refuse freight, except such freight, as by its charter, it is exempted from handling. The classification should be clear upon this point, that there may be no room for a conflict of opinion as to what is dangerous, etc., to handle.

The Association did not press its views upon rules 3 and 8 as not being of sufficient importance for consideration under the question of temporary classification. These rules will stand over for further consideration.

PENALTY FOR INCORRECTLY DESCRIBED GOODS

Rule No. 20 B refers to the penalty which Classification No. 12 authorizes the railway agent to impose when he suspects that goods are shipped under false names, or falsely classified, in order to deceive the carriers. This penalty is 50% upon the freight charges. It would be difficult for a court of law to decide whether the misdescription of goods was intentional, or accidental. It is not fair to the shipping public to repose the responsibility of arriving at a decision in this matter, and imposing the penalty, in the hands of an inexperienced and incompetent tribunal. The Hon. Mr. Blair stated that this new condition was one of the conditions of the classification which was issued before the law of the land was framed and that it is not operative. He stated further that the Board could not sanction a rule appended to the classification that would be contrary to the expressed provision of the statute. Said Mr. Blair, "The statute provides that the Board may make regulations providing that any such person or company shall in addition to the regular tolls be liable to the regular toll and the penalty not exceeding 50% of the regular charge, that is, the penalty can only be enforced against the party in the court."

It is probable that this rule will appear in the temporary classification bearing the approval of the Board, but no manufacturer need submit to the condition which it is not within the right of the railway companies to enforce, but in respect to which like the shipper who has a grievance against the railway, the railways must appeal to the Board, or, as the Hon. Mr. Blair pointed out, to the court.

This concluded the discussion with regard to the discrepancies between the rules of Classification No. 11 and the rules of Classification No. 12, following upon which the department discusses the various rules which had been continued from time to time through various classifications with little or no modification, criticisms being confined to those rules to which objections might be raised by the shipping public.

RULE NO. 1—MINIMUM WEIGHTS

Under rule No. 1 the railway agents are instructed to charge upon perishable freight, loaded in refrigerator cars, not less than 6th class basis of rates. This would make the rate on vegetables loaded in refrigerator cars 6th class, while if loaded in box cars the rate would be 8th class. The cost of providing refrigerator cars over the cost of the ordinary box car is not sufficient to warrant an increase in charges from 8th to 6th class. In the Official Classification no such rules obtain.

It was contended that that portion of rule 1 which authorizes the railways to transfer the overload or excess load of a car and charge upon it the actual weight, less than carload rate, from point of shipment to destination, is unreasonable, as far as the rule is applicable to property for which minimum weights are provided, that at the same time represent the stenciled capacity of the car. For example, the minimum weight of stone and grain is frequently the same as the stenciled capacity of the car supplied. In this case it is difficult for a shipper, in loading, to hit exactly the minimum weight. If he underloads his car, he pays on dead weight, if he overloads, the excess load is transhipped and charged at less than carload rate. The suggestion made was that where the minimum weight and stenciled capacity of the car are the same, the shipper should have a margin of 10 per cent. over and under the marked capacity of car or an aggregate margin of 20 per cent., which should be quite sufficient to protect him from dead weight, and the excessive charges for overloads.

RULE NO. 6—LIGHT AND BULKY FREIGHT ON FLAT CARS

Rule 6 provides that where property is too long or too large to be loaded in 36 foot box cars and has to be loaded on flat cars, the charge for the property on the flat car shall not be less than the charge for the same property in a box car, and in no case less than 6,000 lbs. at first-class rate. This means a hardship to many shippers. For example, an iron beam may be just a few inches too long to go in a box car. It may weigh but 1,000 lbs. If it could be loaded in a box car, the charge would be third-class rate, actual weight. The charge L.C.L. from Toronto to Montreal would be 30 cents per one hundred lbs. or $3.00 full, while if loaded on flat car the rate is run up to 40 cents per 100 lbs. at 6,000 lbs., total charge $24.00. As compared with the rules of the United States

classifications, the Canadian classification is not as liberal, so far as the enquiry of this department extends. The Western Classification makes the minimum charge 5,000 lbs. first-class, while in the Official, Illinois, Florida, and Southern Classifications the minimum weight is 4,000 lbs., at first-class rate. This rule will also be brought up for discussion when the final classification is under consideration.

RULE NO. 7—OWNER'S RISK AND "RELEASED"

Rule No. 7—Upon the question of "Owner's Risk" and "Released" the railways were asked to state what these terms mean. The opinion of this department is that "released" is a term synonomous to "owner's risk" and merely imposes upon the shipper the increased responsibility of a formally signed document, which at the same time in a great many cases is hardly legal. So far as the decisions of the Courts of Law go and so far as the Commissioners of the various states have been considering the question of "owner's risk," their decisions have been that the railway cannot escape its common law liability by special conditions in its bills of lading or other forms and that these special conditions, will not relieve the railway from the responsibility to safely carry the property that is entrusted to its care. Some years ago the railways issued in Toronto and elsewhere a card giving a list of commodities, the transportation of which was subject to the risk of owners. Strenuous objections were raised in Toronto and elsewhere, at that time to the enforcement of this rule, and in as far as these objections were brought home with sufficient force to the railway companies the objectionable regulation was not enforced. It is enforced, however, in some localities. In so far as it is enforced in some localities and not in others, this constitutes an unjust discrimination. The department is indebted to one of the prominent merchants of Toronto for a suggestion which appears to be reasonable, and this suggestion was urged before the Board as one worthy of consideration, that the reasonable transportation risks should fall to the carriers and be included in their rates. The contract is to carry safely in spite of exemptions from liability which the railway company desire to impose. If it were not so, the charge of 50 per cent. for insurance of safe transportation is excessive. The only case where the railway can reasonably expect to be exempted from the ordinary responsibilities of a carrier is where the property offered for transportation possesses in itself some weakness or fragility, against the breakage or injuring of which, the railways could not reasonably be expected to provide, or is improperly packed. Whether the bills of lading provide for no liability or make no provision whatever in this respect, it is hardly likely any court would hold the railway responsible for the breakage of property, against which breakage all diligence and care in handling was without avail. The practice of making two sets of rates, one of which provides that the carrier shall take the risk and the other that the shipper will take the risk, is one recognized by the law of England, but not, it is believed, to the extent that the railways in Canada carry it. In England it must be shown where the case comes before the Court that the railway distinctly gives the shipper the option of the alternative rates, one, low with limited liability, and the other, a higher rate where the railway assumes the liability. Barring fragile and improperly packed goods which the reasonable care of the railway cannot protect, there does not seem to be any reason why the carrier should be permitted to limit its liability. The result of this limited responsibility works to the disadvantage of that manufacturer or shipper, who realizes the value of insurance in transportation as in other branches of his business. He desires to know that the goods entrusted to the railway shall be safely transported. At the same time he cannot afford to pay the additional penalty of 50 per cent. This penalty is escaped by other manufacturers or shippers who are either not aware of the risk they run in accepting the condition "owner's risk" or "release" or feel that the competition imposed upon them by rivals makes it necessary to take the risk, if risk they must take, to secure the lower basis of rates. It is contended by the merchant referred to above that the railway rates should be uniform and that they should cover the insurance of the property. It is urged that the merchant who feels that he must have his property insured should not be forced by the keen competition of business to accept risks, that he cannot properly gauge, by this system of the railway companies, of making two sets of rates, one including, and the other not including, safe transportation.

RULE NO. 9—ARTICLES CARRIED SUBJECT TO SPECIAL CONTRACT

Rule No. 9 has reference to commodities carried subject to special contract. In connection with this rule, it was urged that there does not seem to be any reason why some at least of the various commodities classifiied as subject to special contract should not be provided outright with reasonable rates. Cedar posts and fence posts are subject to special contract, not because the property is dangerous for transportation, or for any other reasonable condition, but because the railways desire to preserve the cedar on their line for their own use. In this connection, the Interstate Commerce Commission has ruled that 6th class in the Official Classification must be applied on cedar posts, the same rating as provided for lumber. The owners of these goods, the Commissioners further ruled, are entitled to sell them in the best market, and the carriers, to prevent this, are not allowed to charge unreasonable rates. Copper boilers and large brass and copper vessels are subject to special contract, though it does appear that when carried on flat cars (when not too large for the ordinary clearances of the railway) that rule 6 basis should not be charged.

RULE NO. 26—CAR STORAGE

Rule No. 26, car rental and car storage. The attention of the Commission was directed to the fact that frequently these charges are unfairly imposed. The Association does not take exception to this charge, or the practice of making it, but contends that the rules now applied are not elastic. The shipper should be given some latitude, when the cars are bunched in transit, over and above the ordinary unloading allowance of individual car lots. In some of the States of the Union a penalty is charged against the railway which fails to move cars from point of shipment promptly, fails to place them promptly for unloading, and also, in some cases, where the railways fail to supply cars promptly. The railway law of Texas places the penalty at $25 per car per day, payable to the shipper, by the railway which fails to supply cars within reasonable time, or by a shipper who fails to load the property promptly. The principle of the Texan law is a good one, but the charge is excessive.

The railways have among themselves an agreement, under which what are known as foreign cars, or cars not belonging to the railway, which happen to be hauling them in its trains or holding them on its lines, are subject to a penalty to the owning road of 20 cents per car per day for 20 days, after which, on ten days' notice that the return of the cars is required, the penalty is increased to $1 per day. This internal railway legislation, which took the place of the car mileage system, has been attended with beneficial results, and has been followed by a prompt movement of cars by using lines. It is urged that a penalty, placed on the shipper or consignee who detains cars unduly, and on the railway which fails to supply them promptly or move them promptly from the shipping point to the destination, would have the effect of securing a prompt movement of cars, and would in a long run be in the interest of the railways themselves as well as of the shippers.

In a comparatively new country like Canada, where development should be rapid, the car equipment to facilitate development must be up to, if not in advance of, the requirements of the traffic, otherwise, as has been the case here during the past four years, the inability of the railways, through inadequate facilities and equipment, to handle the trade of the country, results in serious loss to the merchant and acts upon the trade as an objectionable restraint.

There is no incentive, other than a desire for increased revenue, to the railways to maintain their equipment on a reasonable basis under the present system. Where money is actually paid out (even in small sums) against the shortage of cars the railway managements would soon learn to what extent their want of facilities lessens the business, and, at the same time, tends to increase the expenses of the railway company.

RULE NO. 30—"FINALS"

The last rule considered was rule No. 30; the charge for smalls. In Canada the minimum charge is 35 cents, while, as far as the observation of this department extends, in United States the charge is 25 cents. The Official and Southern Classifications, applicable throughout the broad territory east of the Mississippi River, authorizes a charge of 25 cents, as do also the classifications of the States of Texas, Florida, Georgia, and local railway regulations of the States of New York, Montana, Minnesota, North and South Dakota, Iowa, Missouri. These charges for smalls taken as they are in conjunction with cartage, where the smalls are carted by the railway agents, impose a serious disadvantage upon the movement of small packages. The railways desire to force this business to the express companies, for the reason that smalls handled by express would pay better than by freight. The larger railways own express companies. The shippers object to the excessive charges for handling by freight trains and require that the charges for smalls by freight and for smalls by express shall be justly related to the expense to the railways of performing the respective services. This rule will also be given consideration when definite classification is brought up.

CLASSIFICATION OF COMMODITIES.

Argument on the classification was continued June 24th, when individual ratings were considered. So as to limit the discussion as much as possible, the suggestion was made, for the first time, that a temporary classification be issued, which would have the effect of throwing over for future consideration those various ratings that are the same in both classifications but which may be unfair to the manufacturers interested.

TEMPORARY CLASSIFICATION

In order to assist in reaching a conclusion the Association again outlines the arguments previously advanced in favor of a temporary classification, with Classification No. 11 as a basis.

First. That the new ratings added since Classification No. 11 was issued which are either the outcome of analogy, or the result of a voluntary consideration, by the railways, of the peculiar merits of the various new commodities submitted for rating, should form a part of the temporary issue.

Second. That the ratings of the specific commodities, which have been advanced in Classification No. 12 over the ratings authorized in Classification No. 11, should be restored in the temporary issue, to the basis of Classification No. 11; because the Act requires from the railways a notice of six weeks of any desire to change the classification, which notice could not be given so that the commissioners might consider the proposed changes before leaving at an early date for the Coast.

Third. That such reduced ratings as the railways have agreed to make (a number have been agreed upon but are withheld from the public) should be included in the temporary classification. This would work no hardship to the railways since these rates have been conceded voluntarily after considering the individual merits of the individual commodities. The railways were disposed to ask that the increased ratings should be allowed by the Board without investigation, for no other reason than that they had made reduced ratings on other commodities. In this connection, it was argued by the Association that the saw-off principle cannot be introduced into the making of classification, that all commodities must be considered, each on its individual merits. The railways stated that there were but 21 ratings in the Classification No. 12 representing increases over the Classification No. 11. This statement was incorrect. Advances can be made either by an alteration of the rules or by a change in the ratings of the commodities themselves. The reference made by the railways to the advances applied only to the changes in ratings representing but a small portion of the commodities upon which charges for transportation have been increased in the Classification No. 12. After a good deal of discussion in which the railway representatives seemed to be desirous of drawing away from the principles above laid down, it was agreed to discuss them one by one. No objection was raised to point one and none to point three, but the railway companies decidedly objected to the suggestion embodied in point two. It was then decided to consider the objections to point two, item by item.

In dealing with Classification Rule No. 1, (minimum weights) as before stated, it was agreed to accept temporarily the measure of relief, offered by the railway companies, in the withheld supplement. Regarding rule 2, (mixed carloads) it was agreed to accept the rule as in the present classification on business in the territory west of Port Arthur and on shipments moving into that territory; rule 2 of Classification No. 11 to be restored on business moving between points east of Port Arthur.

In discussing the various ratings, it was stated by the Association that probably the main objection to the restoration of the reduced ratings would centre around the rating of metallic shingles. After some discussion, it was agreed to have a special case presented on this commodity. It was also decided to have special cases heard with regard to window shades mounted on rollers, and on lawn mowers.

While, as stated above, the mixed carload privilege of Classification No. 11 is to be restored east of Port Arthur, any reasonable extension of the present distinctive heading principle of making up mixed carloads, which is to be applied temporarily to and between points west of Port Arthur, will continue to be valuable to the shippers interested until the question is definitely settled. In this connection, several extensions have been made by the railways by adding children's carriages and waggons to the furniture list, by adding incubators and brooders to the agricultural implement list; agate ware, granite ware and enamelled ware to the hardware list, stamped ware, also tin ware, etc., to the hardware list, tinsmiths' tools to the hardware list, radiators to the plumbers' supply list, grain to the seed list, and varnish to the paint list.

In addition to the reduced ratings of Classification No. 11, which are to be restored, of which the following list was published in *Industrial Canada* for July, is also given below a rough statement of additional reduced ratings which are to take effect with the supplement to the present classification on August 1st:

	Classification to-day L.C.L.—C.L.		Classification will now be L.C.L.—C.L.	
Plows, Gang, Sulky, Shovel or Riding	1	6	2	6
Furs, manufactured	D 1	..	1	..
Iron Beams, Columns and Girders	3	5	3	6
Skewers, in boxes or barrels	2	5	3	5
Bells, cow, in cases	1	..	2	..
Fanning Mills, set up, minimum weight, 36 ft. cars, 20,000 lbs	.	6	..	..
Min. weight, 36 ft. cars, 14,000 lbs	..	..	..	4
Min. weight, 40 ft. cars, 24,000 lbs	..	6	..	..
Min. weight, 40 ft. cars, 15,500 lbs	..	..	..	4
Gramophones and Graphophones	D 1	..	1	..
Seats, Agricultural Implements, nested, ironed or crated	1	6	2	6
Artificial Stone	4	7	4	10
Asphaltum in sacks	3	5	4	10
Barrels, empty, in box cars, minimum	2,000 lbs.		14,000 lbs.	
" racked, platform cars, minimum.	2,000 lbs.		18,000 lbs.	
Copper Ingots				4
Desks, office or other, crated or boxed	1½	4	1	4
Furs, manufactured	D 1		1	
Hammers in cases	2		3	5
Blowers (iron rotary) and exhaust fans	1	6	2	6
Envelopes, common	1	4	2	4
Exercise, Scribbling Books, etc.	1	4	2	4
Stoves and Furnaces, C.L. rating, generally speaking reduced to 5th class				

The above represents a summary of the principal points dwelt upon when the classification was discussed before the Board. It is emphasized that the arrangement arrived at, under which the present classification is approved, is a temporary one. It is understood that the discussion is to be opened in the near future with respect to arrangement and approval of a definite classification. Classification is at the root of the transportation question as it appeals to the majority of the Canadian shippers. It contains the key to all merchandise tariffs issued by the railways, and fixes the rates of such tariffs that are to be charged with respect to commodities. An error in the classification under which a higher rating is authorized where a lower class rating should be applied or an inconsistency in the classification that would produce the same effect —any feature of the classification that would involve the charging upon commodities of discriminatory rates would mean either a serious drain on the profits of a business or else a curtailment of operations. The classification, too, as fixing the rates to be charged under the merchandise tariffs may fix rates for certain commodities upon a basis which is too high when the rating of similar commodities in the Official Classification (U.S.) and the rates from the tariffs of the United States lines as applicable to ratings are considered. The influence of the customs tariff to protect Canadian industries might be entirely counteracted in some cases by a discrepancy between the classification of Canada and the Official Classification of the United States. The class rates for merchandise traffic from United States points into Canada are generally speaking on a lower mileage scale than the local class rates of the Canadian roads. If you add to this a discrepancy as between the classifications, say, a third class rating in the Canadian and a fourth class rating in the Official Classification, it is easy to see the difficulty that the Canadian manufacturer will have to contend with, in spite of the customs tariff, in competing with the manufacturer of the United States. The whole question of classification is an important matter to the average shipper, and one which should demand the most careful consideration. As stated above, the classification question is to be re-opened for consideration at an early date, and in as far as manufacturers, who are not already in communication with the Transportation Department are desirous of bringing to the attention of the Department what they consider to be classification difficulties or discrepancies with respect to their particular goods, they should communicate with the Department at once.

CAR STORAGE, CAR RENTAL OR DEMURRAGE

Some reference is made above under the heading of Classification to the question of car rental or the delay to cars by shippers in loading and car storage, or the delay to property in cars awaiting unloading.

The Board have been asked, by the Dominion Millers' Association and others, to give this matter consideration. On the suggestion of this Department, a statement of the views of the manufacturers is to be presented before any definite conclusion is reached. It is desirable that the Department should be furnished with the principal difficulties of the manufacturers in regard to demurrage. The Association will be grateful if the individual members will communicate to the Transportation Department without delay specific difficulties, with any suggestions they may have to make on the subject. Members may bear in mind that all communications upon this or any other subject are considered confidential. It is highly desirable, if a satisfactory conclusion is to be arrived at, that the Association should put in its case, as covering all the difficulties of its individual members. This can only be done by a carefully prepared, prompt and complete statement from the individual members of their individual difficulties.

GLASSWARE CASE

The decision of the Board handed down in Ottawa July 30th orders carload rates to London, 8 cents; Berlin, Hamilton and Toronto, 13 cents; Montreal, 23½ cents. The present rates are: London, 13 cents; Hamilton and Berlin, 19 cents; Toronto, 18 cents (tariff 20 cents); Montreal, 25 cents (tariff 30 cents). The special rates formerly enjoyed were, to Toronto 15 cents, Montreal 21 cents per 100 lbs.

COOPERAGE CASE

The decision of the Board handed out in Ottawa July 30th orders the reinstatement of the rate of 16½ cents to Montreal for local consumption, and makes the rate for export including terminal charges 18 cents. The present rates are 18 cents for local consumption and 19½ cents for export.

A NEW FIELD IN SAN DOMINGO

A correspondent from Puerto Plata sends a list of the principal articles imported and exported by San Domingo, and remarks that a goodly share of this trade might well be enjoyed by Canada.

The time appears to be an opportune one for opening trade relations with that country. San Domingo is now at peace, and a reasonable assurance that it will remain so is afforded by the fact that the President has been promised assistance by the Government of the United States in checking the revolutionary tendencies of the native population. The soil is particularly fertile, and the land rich in natural resources, so that for those going in at the present time there seems every prospect for a large measure of success.

In 1901 the island exported tobacco, cocoa, sugar, hardwoods and hides to the value of $5,190,000. The nature of her imports, their value, and the country of origin, are given in the following table :

United States—Machinery, tools, weapons, fats, salted meats, fishstuffs, cheese, hardware, flour, coal, cotton, drugs, shoes and felt hats, $1,994,315.

Germany—Liquors, oils, rice, cheese, matches, zinc, food preserves, kitchen utensils, glass, linen, hosiery, embroideries, $718,633.

France—Liquors, cloths, straw hats, wines, hosiery, fancy goods, medicines, toys, perfumeries, $502,410,

Spain—Onions, garlic, potatoes, dried meats, preserved fruits, $17,820.

The chief difficulty under which the country has to labor in the way of receiving shipments of goods from abroad consists in the fact that the Wm. P. Clyde Co. have a concession from a former President granting them a monopoly of trade with the United States. This company further enjoys an exemption from all port dues, which amount to $2.50 per ton of cargo brought into or exported from the island. There is in consequence almost no competition. In their concession, however, no mention is made of Canada, and among the business men of Puerto Plata the belief is quite general that if a Canadian line could be induced to include that port in its itinerary, the Government, which is a progressive one, would be inclined to deal with them very liberally. The Hamburg-American Line does quite a trade with San Domingo, and recently paid $48,000 for the right of entry for two years. There is also a French line trading with the island, called La Compagnie Generale Transatlantique.

A CORRECTION AND AN APOLOGY

In our last issue we quoted an extract from the *Mail and Empire* of June 25th, purporting to set forth the views of Mr Harrison Watson on the proposal to establish an office of the Association in London, Eng. Mr. Watson has since written to say that the statement appearing in the *Mail and Empire* is entirely erroneous. He informs us that his opinion was never asked upon the subject; that he never made the statements attributed to him either concerning our London Office or the Canadian Exhibit at the Imperial Institute, and that his personal views on these matters are quite at variance with the report as published.

Under the circumstances we desire to give the widest publicity to this retraction of our remarks concerning Mr. Watson's opinions on the subject, and deeply regret that we should have been an unwitting instrument in causing him to be misrepresented.

COMPLIMENTARY DINNER TO THE PRESIDENT

Mr. Drummond speaks on the subject of Preferential Trade—Imperialism the Keynote of the Evening—Canada's Commercial Condition and Imperial Defence Discussed

ONE of the most successful dinners ever given by the Canadian Manufacturers' Association, was that tendered to their President, Mr. George Edward Drummond, by the Montreal members of the Association, on Thursday evening, July 21st. In spite of the fact that it was held on a midsummer evening, the Montreal Chairman, Mr. C. C. Ballantyne, found about one hundred members seated before him in the Canada Club at 8.30 p.m., when the ceremonies were begun.

At his right were Mr. Drummond, Hon. L. P. Brodeur, R. L. Borden, Esq., M. P., A. Hodgson, ex-President Montreal Board of Trade, C. H. Catelli, representing La Chambre de Commerce, R. S. White, Collector of Customs, and R. A. Donald representing Mr. W. K. George, the Vice-President of the Association. On his left were Hon. Raymond Prefontaine, Robert Meighen, Esq., F. D. Monk, Esq., M.P., and H. Cockshutt, Vice-President C.M.A. for the Province of Ontario.

The cosy new quarters of the Canada Club lent an additional charm to the occasion, enhanced by the music from Silverston's Orchestra, and Mr. G. Duquette's powerful basso voice in patriotic song.

The occasion was prompted by Mr. Drummond's recent visit to England, where he met Mr. Chamberlain and many of the leading men in England, always consistently advocating the views of the manufacturers of Canada upon the Imperial trade question. Imperialism was the key-note of the evening, and its discourse will leave a powerful impression upon the minds of those who were present.

The toast of the " King " was heartily honored. It was followed by " Our President " fittingly proposed by Mr. Ballantyne.

Mr. Drummond after a word of appreciation spoke as follows :

It has been intimated to me that you would like to hear a little as to the visit to Great Britain which my colleagues, Messrs. Hodson and Ames, and I myself, were privileged to make recently as the representatives of the Montreal Board of Trade, when I also had the honor of representing this Association.

I accede to this request with the more pleasure because I feel that anything and everything concerning our fellow-subjects in the Old Land interests you, as its does myself, and because you and I, like every true son of Canada, stand first, last and all the time for strengthening by every possible means the ties that bind us to the great Empire.

GREAT RECEPTION

You know, of course, that my colleagues and I went over on the invitation of the London Chamber of Commerce, to attend their annnal banquet held in London in March. From the hour of our arrival in Liverpool until we left the shores of England we were made to feel that we were among warm hearted kinsmen, The hospitalities (both public and private) extended to us, and which we accepted as your representatives and the representatives of the Montreal Board of Trade, were princely, and in every way worthy of the Mother Country. Everywhere we went Canada was the theme and everywhere, Englishmen, who as one of the most eminent of Britain's younger statesmen said to me on one occasion, are not usually given to "wearing their hearts on their sleeves," departing from their customary reticence, spoke in the warmest and most fraternal terms of Canadians, and of Canada herself as the "hope of the Old World and pride of the New." To us, as probably to all Canadians visiting Britain in recent times, it was most gratifying to find how much more thoroughly our Dominion is appreciated over there than she was wont to be in days gone by. As I have said on another occasion, we owe much of this great awakening and much of this good feeling to the part we took as a loyal British people in respect to the South African war ; we owe much to the untiring, unselfish labors of Lord Strathcona, who, as High Commissioner, works unceasingly for Canadian interests. The work of our Dominion Immigration Department is also bearing fruit. Aside from official methods, however, I know of nothing that could have been of greater service in bringing Canada into prominence in Britain than the visit of the delegates of the Chambers of Commerce of the Empire to Canada last August. These British delegates, almost without exception, seem to have constituted themselves "special Canadian agents," and the Canadian resources and the chances for the profitable development of the same are being discussed as never before in the financial trade circles of Britain. In this connection I have ventured to predict that more British capital will seek investment in Canada within the next five years than has reached us in the whole of the past decade.

OWING TO CHAMBERLAIN

We owe not a little of this rapidly growing intelligent interest in things Canadian to the discussion of the great fiscal question projected into Imperial politics with such force by Mr. Chamberlain. Canada is looked upon, and rightly, as the pivotal point of the whole preferential question ; so much so indeed, that a false step at the present time on the part of our Canadian Government would mar, just as, on the other hand, a wise and statesmanlike endorsement by the Canadian Parliament of the principle of mutual preference in trade as needful for the thorough consolidation of the Empire, would, at this critical juncture, make for the safety of a measure the successful accomplishment of which will mean so much to the future welfare of Canada and the Empire.

During my stay in England, I had the opportunity of meeting some notable men, not only in financial and trade circles, but also in political circles ; and I had an opportunity to obtain at first hand their views on the fiscal question. When I mention the names of such men as Sir Charles Dilke, Sir Wm. Holland, Sir Chas. Renshaw, Hon. Wm. Hayes Fisher, Lord Brassey, Hon. T. A. Brassey, Right Hon. James Parker Smith, Right Hon. Sir John Colomb, Mr. Wm. Farrer Ecroyd, the father of Fair Trade in England ; Walter Runciman, Earl Grey, the Duke of Argyle, and last, but not least, Mr. Chamberlain himself, you will realize that I had an opportunity of ascertaining the views of strong political opponents as well as supporters of Mr. Chamberlain's great policy. I counted as the greatest privilege and pleasure that of meeting Mr. Chamberlain himself.

CHAMBERLAIN FULL OF VIGOR

I found Mr. Chamberlain full of vigor, and full of confidence that the great cause for which he personally has sacrificed so much, will triumph in the end. I was immensely impressed with his sincerity and singleness of aim, namely, the firm and effective federation of our people the world over, and the preservation of British interests (both labor and capital) against the unfair competition of foreign rivals, to which these interests are, under the present system of free imports, subjected. Mr. Chamberlain is fully convinced that the time has come for a reorganization of the Empire, and that the best, safest and surest way to effect a permanent consolidation of interests is through the medium of a mutual arrangement by which each section of the Empire will grant to the products of the other a preference as against the products of foreign labor. In this, Mr. Chamberlain's idea is exactly in accord with the view held and publicly expressed again and again by the Boards of Trade and Chambers of Commerce of Canada, a view that has been fully endorsed by the Canadian Manufacturers' Association.

NO SACRIFICE REQUIRED

Mr. Chamberlain, in speaking to me on the subject, repudiated strongly the statement which has been made that he expects Canada, under a preferential arrangement, to sacrifice, or in the slightest degree to hinder or curtail, the fullest possible development of the industrial enterprises that we have already established or may hereafter establish.

Mr. Chamberlain's views are quite in accord with those held by the members of the Canadian Manufacturers' Association.

We believe that an effective, well-considered mutual arrangement may well be arrived at by which, while local interests in the United Kingdom and in the Colonies can be fully and equitably safeguarded and kept prosperous, yet at the same time a very large trade that now goes to foreign and commercially antagonistic capital and labor can be diverted to our own people within the Empire.

This common sense policy must triumph in the end. Even among Mr. Chamberlain's strong political opponents there is already a sincere desire for a Royal Commission, representative of the Colonies as well as the Mother Country, to consider the whole question.

As to Mr. Chamberlain's personality, no one can meet him without realizing that Mr. Chamberlain is in every sense a leader of men. He impresses you as a strong, safe, courageous statesman, who at the same time possesses in an unusual degree the best qualities of a clear-headed, practical business man, thorough in everything he does—surely just the man qualified to lead a commercial people in this commercially strenuous time.

HAS WORKINGMEN'S SUPPORT

With respect to his sincerity of purpose in the present struggle, even his bitterest opponents, who are mostly among politicians and doctrinaires, admit that he has gone into the struggle from the highest and most patriotic motives. At the very zenith of his fame, he surrendered his position in a Cabinet in which, to use his own words, he had grown to love his work, and has voluntarily imposed upon himself, at an age when most men look for rest and quiet, a task which must, in any event, fill the best remaining years of his life with work of the most arduous nature. One cannot help but admire such a man, and his admirers are legion, especially in the Midlands of England. I believe that the workingmen will eventually rally to his support. A system that has resulted in bringing Campbell-Bannerman's twelve million British people to the point of starvation, is so clearly bad that even the cry of "dear loaf" will not long serve to keep the British workmen from supporting a statesman who has so well served their interests in the past as has Mr. Chamberlain.

Campbell-Bannerman's arguments have, in the Midlands of England, proved somewhat of a boomerang, and Mr. Chamberlain's cause has been very much strengthened in the minds of the practical people composing the population of that section of England.



MR. GEO. E. DRUMMOND

In this connection I am reminded of the advice given to Mr. Chamberlain's opponents recently by Mr. Geo. Senior, Ex-Lord Mayor of Sheffield, and one of the hardest-headed business men in the Midlands of England. He said :

SCRIPTURAL AUTHORITY

"We deplore the conditions that enable Campbell-Bannerman to state that twelve million British people are on the point of starvation. Does he wish to know the remedy? Let him refer to the XLI Chapter of Genesis, 55th verse.

"And when all the land of Egypt was famished, the people cried unto Pharaoh for bread, and Pharaoh said unto all the Egyptians, go unto Joseph, what he saith to you, do."

The statute books of Britain must be a constant reminder to her workpeople that Joseph Chamberlain has proved their friend again and again. And, moreover, he knows them and their aspirations as no other public man in England knows them. I can well understand the truth of what has been said in this respect of Mr. Chamberlain, namely, that when he speaks to workmen, or of them, they are real workmen, and when he discusses business, manufacturing or trade, he is understood by the classes whose interests are under consideration. The workmen of England know that such a man is not likely to father a policy calculated to injure their interests, and when the cobwebs of Cobdenism are brushed away, as they will be, they will realize, as Canadian workmen do, that it is of prime importance that the product of their labor should be safeguarded against the unfair competition of their foreign rivals.

CHARACTERISTICS OF CHAMBERLAIN

As to Mr. Chamberlain's qualities as a statesman, and as showing his strength of character, Parker Smith, who, as you are aware, was his private secretary during the Boer war, told me that he learned to know Mr. Chamberlain under the stress and strain of that awful time, and learned to admire him above any man he ever met or hoped to meet. Cool, calm, under all circumstances, and full of courage, he is the very beau ideal of a British statesman.

Parker Smith related to me one anecdote that I shall never forget. Things had been going badly enough in South Africa, when, one night, came the tidings of the terrible disaster at Colenso ; the guns lost, the army cut to pieces, Buller defeated. To Parker Smith fell the duty of carrying the news to Mr. Chamberlain. There was consternation among those present; only Mr. Chamberlain sat quiet.

Mr. Smith, turning to Mr. Chamberlain, asked : "Mr. Chamberlain, what will happen if they drive us to the sea?"

"What will happen?" said Mr. Chamberlain ; "what will happen? Why, we will simply start over again. We will drive them back again."

That is the statesman who won out and kept Great Britain in the front rank, thus preserving the Empire. That is the statesman who, when the war was over, crossed to South Africa, met the Boer leaders, dealt fairly, squarely, and generously with them, and brought them into the Empire. He is the statesman who, sacrificing ease, comfort, and the emoluments of office, is fighting now for the consolidation of the Empire, and whom every man in Canada, worthy of the name, should stand by.

PREFERENTIAL TRADE

And now, as to our duty in Canada in respect to the great question of preferential trade and its highest ultimate object, the binding together of the United Kingdom and her colonies in an Imperial alliance.

I am convinced from what I heard and saw in England, that the time has arrived when our Parliament should voice the wish of the Canadian people, as expressed by our trade organizations in every centre from Sydney and Halifax to Vancouver and Victoria; that the general interests demand that our Parliament should move to get a mutual preferential trade arrangement that will make for the permanent consolidation of the Empire.

I believe further that much of the opposition which Mr. Chamberlain is experiencing in Great Britain would be removed if our Canadian Parliament would now face the question of Canada contributing, in a Canadian way, and on the initiative of our own Parliament, to the naval defence of the Empire, a service which we now enjoy without the payment of a single cent. We owe it to our self-respect to do this. The delegates to this great Chamber of Commerce meeting held here last August, at which this Association was fully represented, supported this principle by a unanimous and enthusiastic vote.

It is obviously unfair to expect the British tax-payer to continue paying the whole cost of a navy which guards Canadian tonnage and interests equally with those of the United Kingdom. A fair settlement of this question, a "clearing of the deck" so to speak, would, I believe, result in the removal of a good deal of the opposition which a portion of the general British public have, at first blush, shown to the idea of risking even a possible increase in the cost of living by placing a tax on foreign breadstuffs, so as to confer a preference on Colonial products.

LOCAL MATTERS

And now to turn to local matters. It seems fitting that the members of an association as national in character as ours, an association under the auspices of which Canadians of every shade of politics can foregather, even in such pleasant reunions as this, and free from the paralyzing effects of mere party politics, party affiliations, and party exigencies, of which we have far too much in Canada, discuss questions affecting the moral and material welfare of our country, taking common ground together, when necessary, to see that the views of the business community in Canada are heard and considered by the representatives of the people in Parliament.

There comes a time probably in the history of every young nation, when with a somewhat covetous world awakening to her possibilities, as the world is undoubtedly awakening to those of Canada, it will require the greatest watchfulness, unswerving loyalty, and the most profound wisdom on the part of her statesmen and people to guide her on the right course. I think that that time has come in Canada, and indeed for our common Empire. Great questions and grave problems are looming up that must be grappled with and settled satisfactorily, if we are to preserve the institutions and the ties that we have grown to love. Outside influences, as well as mistaken views at home, will have to be met and reckoned with.

REORGANIZATION OF EMPIRE

Perhaps the greatest question of the hour is the reorganization of the Empire to which we belong, and to which I hope we will forever belong. It is no new question. Nova Scotia's great son, Joseph Howe, urged the importance of reorganization upon the peoples of our Empire fifty years ago. To-day with a population of nearly six million, and with our people entering upon a world career, the matter is acute and must be dealt with. In discussing the urgent necessity of consolidating the Empire, we may well recall to mind the words of Alexander Hamilton, the Father of United States Federation, spoken in 1788, at a time when he and others were fighting for the union of the scattered states. He said:

"It may be in me a defect of political fortitude, but I acknowledge that I cannot entertain an equal tranquility with those who affect to treat the danger of a longer continuance in our present situation as imaginary. A nation without a national Government is an awful spectacle. The establishment of a constitution in time of profound peace by the voluntary consent of a whole people, is a prodigy, to the completion of which I look forward with trembling anxiety. In so arduous an enterprise I can reconcile it to no rules of prudence to let go the hold we now have upon seven out of the thirteen states, and after having passed over so considerable a part of the ground to recommence the course. I dread the more the consequences of new attempts because I know that powerful individuals in this and in other states are enemies to a general national Government in every possible way."

These words may well apply to the position within our British Empire to-day, to the necessity of consolidation, and to the desirability of providing an Imperial council qualified to deal with matters touching the welfare of the whole Empire.

NEED FOR VIGILANCE

With respect to our own Dominion, there is pretty good proof that powerful individuals and organizations outside this country are working to-day for commercial measures that, if adopted by us, would lead to the end desired by the promoters, and would inevitably change the whole future of Canada, making our existence as a component part of the Empire an impossibility. Now let us take measures that will defeat any such object, and that will hold us fast to the strong British-Canadian foundations which the fathers of confederation—the Macdonalds, Cartiers and Browns—so well and truly laid.

To maintain our national existence we must conserve, protect, and keep prosperous national industries and pursuits, by which and through which our people must gain their livelihood. If the policy which the Canadian Manufacturers' Association has consistently favored and worked for is adopted, we will not only maintain our national existence, but also hold fast to the ties that bind us to the British Empire.

TARIFF REVISION

Two years ago at Halifax, after the most earnest consideration of facts forced upon Canadian manufacturers by practical every-day experience in carrying on business in this country, we, as an association, adopted the following resolution on a unanimous vote:

"Resolved—That in the opinion of this association, the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff, upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries.

"That in any such revision the interests of all sections of the community, whether of agriculture, mining, fishing or manufacturing, should be fully considered, with a view not only to the preservation, but to the further development of all these great natural industries.

"That while such a tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection for all Canadian producers."

Since the date of the Halifax meeting, we have stood consistently by the policy outlined in this resolution, and have

re-affirmed it time and again. We stand by the same policy to-day, and must do so until it is carried into effect in its entirety by the Parliament of this country.

PROTECTION AND PREFERENCE

Certain newspaper critics, and I notice an article in a paper to-night, have charged insincerity against the members of this association in respect to the policy we contend for, claiming that it is impossible to adequately protect the product of Canadian labor and at the same time divert, under a preferential arrangement, a substantial portion of our import trade to our fellow subjects in Great Britain.

The arguments advanced by our critics do not correspond with the facts and experience, as these critics will find if they examine closely the working of the present tariff, at the same time taking into account the fact that Canadian industrial enterprises are not sufficiently advanced and varied enough to care for the full requirements of this country and that where capital has to be secured for new enterprises, and a great many initial difficulties have to be overcome, the expansion is necessarily slow.



MR. C. C. BALLANTYNE

On the other hand, the Dominion is increasing in popula tion and with the extension of railways and other public and private undertakings, our surplus requirements (much of which, by the way, are purchased by the members of this Association as the raw material for our own manufactures) are very large, and must continue to be so. Our orders for surplus requirements, under present conditions, are going largely to foreign and commercially unfriendly trade rivals, who are, and must for a long time remain, the principal competitors of the British manufacturers.

Under efficient protection and encouragement, many new factories will be established in Canada in the course of time. But the population of the Dominion will increase wonderfully during the next twenty-five years, and while the importations may not be so great per head of population, the total imports will steadily increase. The United States, notwithstanding the high tariff, imported merchandise valued at $1,025,719,237 during the fiscal year 1903. If the Government and manufacturers of the United States were willing to admit British goods into the United States on the same basis of duty as Canadian manufacturers are willing that they should be admitted here, the United States importations (our critics no doubt will admit) would be immensely increased, and the British manufacturers, and possibly the critics I refer to, would be among the first to acknowledge with gratitude the fair-mindedness of United States manufacturers who would agree to such an arrangement.

Anything that causes a transfer of industries from the United States to Canada will increase the population of the Dominion, and thus create a large demand for such goods as must be imported.

THE TARIFF AND BRITISH TRADE

Under present tariff conditions one finds that in almost all lines of manufactured goods the importations from foreign countries greatly exceed those from Britain ; woollens and cottons are the only notable exceptions.

Quoting from a memorandum recently prepared regarding importations from abroad, and in which only articles in which the United Kingdom now competes are given, I find eighty-six different lines of manufacture in which Great Britain is competing. Of this she only holds her own in some fifteen lines, notably in woollens and cottons. In all these lines combined we imported from Great Britain in 1903 goods to the value of $52,493,305 only, whereas we imported from foreign sources articles to the value of $107,673,110.

Again roughly speaking 40 per cent. of all the goods we import are admitted free of duty, under our tariff, and it is at least interesting to note that, of the free goods, Great Britain and the colonies combined only managed to secure our trade to the extent of about 20 per cent., whereas on dutiable goods, where the preference becomes operative the United Kingdom and the colonies secured over 31 per cent. of our total import trade.

Had our tariff been properly revised before we extended the present preferential arrangement to Great Britain, we would doubtless have bought more moderately from her in cottons and woollens, but on the other hand, we would assuredly have made up for this many times over by conferring a greatly increased trade upon her in other lines of goods, such, for instance, as iron and steel products that we are importing from foreign centres, and this without in any way necessarily injuring the Canadian industry.

THE MAIN REASON

The main reason why our preferential arrangement has not diverted more orders to Great Britain to cover our surplus requirements, plainly, is that a very large part of the goods which Britain could well supply us with are still on the free list, or practically so and British manufacturers are almost as seriously handicapped as their Canadian brethren in endeavoring to meet in Canada the competition of the trusts of the United States and Germany. There are many lines of goods in which a better devised and higher tariff would have the desired effect of encouraging manufacture in Canada, and, at the same time, diverting surplus orders to British makers, but I will content myself with referring briefly to one or two items under the head of iron and steel, with which I am more familiar.

IRON AND STEEL

In the fiscal year 1903, we imported of iron and steel from foreign sources nearly thirty-two million dollars worth, and from Great Britain only somewhat over ten million dollars worth, or less than 25 per cent. of the total importation. As to the reason for this, take one or two items as an illustration:

Steel rails, for instance, up to the present. have been on the free list. On a free import basis, we neither encourage their production in Canada, nor were we able to divert the orders to our own customers in Great Britain, the percentage form of preference being naturally non-operative.

KEEP CANADA PROSPEROUS

Our first duty to ourselves, and to the Empire, is to keep Canada prosperous, and to make our country attractive to the overflow population of the British Isles and to desirable immigrants from other lands. Above everything else, we want increased population in this country to help us to develop our vast resources. To secure and retain desirable people, we must provide them with remunerative employment when they come to Canada, and that employment must be diversified in nature to suit varying tastes and varying capacities.

So far as our areas of arable land are concerned, no country in the world offers a greater field for successful effort to those who desire to undertake the pursuit of agriculture than does Canada, but we must not overlook the fact that probably not over 10 per cent. of all immigrants that have up to the present, come from Great Britain have been farmers or farm laborers, so it becomes at once apparent that we must establish and maintain industrial enterprises if we are to provide diversified employment for a very large proportion of the people who are seeking, and will continue to seek homes in Canada, and whom we must absorb not only for the purpose of opening up the country and developing its resources, but also to provide a home market for the product of our farms.

PRODUCTION AND PROSPERITY

An able English writer has well said that the final proof of the wealth of any nation, in a political sense, is the work it does, and the things it creates. We must remember, that everything else in the industrial system hinges upon this central fact, round production. It is impossible, he says, for a practical business mind to conceive that any nation will retain its pre-eminence as merchants of goods if it has lost its pre-eminence as makers of goods. Where things are fashioned and finished, there will be a market for things. Traders are easily found, and they are a migratory race. There is no place in the industrial world for a nation of middlemen, and if you should be unfortunate enough to lose first your manufacturing class and then your merchant class, the profits of the producer and of the distributor as well, do you imagine it will be possible to retain your great banking business for very long? To bank is merely to lend, after all, and in order to lend you must make.

The great fabric of commerce is woven together all upon the warp of production. You can no more imagine a great industrial nation to-day which is destitute of manufacturers, and which is all merchant traders and bankers, than you can imagine a piece of silk which is all weft and no warp. But more than this, not only is production whether by manufacturing or agriculture, an essential condition of all other forms of commercial enterprise, but in itself it is more precious to the statesman, inasmuch as it employs and supports a vastly greater body of the inhabitants of any country. What a man has made in a day, a man may sell in an hour, or much less. From a political point of view, therefore, production is the main thing to be considered. If we make, we are rich, if we do not make, we inevitably become poor.

PROTECTION ELSEWHERE

So well are these facts recognized that, with the single exception of Great Britain, all the industrial nations have adopted a policy of protection to home industries and pursuits; and in self-defence, if for no other reason, Great Britain will finally have to adopt the same line of action. The great majority of the Canadian people stand for a tariff revision that will change the unfair trade conditions that our present Customs tariff permits, and under which Canada buys from the United States thirty-four times as much per head of population as the United States buys from Canada.

In the fiscal year 1903, United States bought from Canada about 62c. worth of merchandise per head of population, whereas Canada bought from the United States about $21.46 worth of merchandise per head of population. With regard to the respective farm products, we find ourselves in an equally bad position, the United States only buying about 10c. worth of Canadian farm products, while Canada bought from the United States about $2.90 worth of the same kind of farm products per head of population. In other words, each Canadian bought twenty-nine times as much United States farm products as each person of the United States bought of Canadian farm products.

In addressing you at a dinner held in the Windsor Hotel, on March 26th, 1902, I ventured to say that "no thinking man in this country, be he statesman, banker, manufacturer, merchant or farmer, can examine the trade returns of the Dominion without appreciating the fact that under our present tariff the United States is rapidly and surely absorbing our wealth," and I ventured at the same time, to express the fear that their foothold here would when the time of depression came about "curtail and hamper the further development of our native establishments, if, indeed, it did not put many of them out of business."

TRADE CONDITIONS BAD

I think you will admit that my fears were well grounded, and that conditions to-day in our cotton, woollen, iron, and other trades, are not what either the Government or people of Canada would like to see them. The anti-dumping act has been introduced, but the thorough revision of the tariff which the people of Canada believe to be absolutely necessary to meet fully the conditions, has not yet been undertaken.

The farmers of Canada must realize that practically the only markets available to them for their products lie, first, within the borders of Canada itself, where the great increasing body of consumers are those whose prosperity, directly and indirectly, depends largely upon the safety and prosperity of our native industrial enterprises, and, next, the market afforded by their fellow-subjects in the British Isles.

To demonstrate the great importance of the home market to the Canadian farmer, I may refer to the figures recently prepared by Mr. Watson Griffin, which are based upon the Trade and Navigation Returns, figures which show that, in 1902, Ontario and the North West produced three times as much wheat, thirty times as much oats, and forty-seven times as much barley as the whole Dominion exported. What became of the balance of these crops? They were consumed in Canada. As for perishable articles, such as fruits, vegetables, butter, eggs, etc., the home market is absolutely indispensable to the farmer. The safety of his market must far outweigh every other consideration with the intelligent agriculturalist of Canada, and therefore from this time forth the farmers, manufacturers, and workingmen of Canada should stand together for a strong fiscal policy that will conserve and protect Canadian enterprises and pursuits as efficiently as the interests of their rivals are conserved under the protective customs tariff in force in the United States, Germany, and elsewhere.

EFFICIENT PROTECTION NEEDED

That the workingmen of Canada appreciate the absolute necessity of efficient protection to our native industrial enterprises is, perhaps, best evidenced by the resolution unanimously adopted by the National Trades and Labor Congress of Canada, at its session in the City of Quebec, in September, 1903, as follows:

"Whereas, the most important benefit by a Canadian customs tariff is to raise the standard of living among Canadian wage-earners; and, whereas, the existing tariff exposes some lines of industry to an unwholesome and unwarranted competition with the low-priced labor industries of European countries, and other lines to the slaughter tactics of the United States producers, thus endangering the stability of the Canadian labor market,

"Therefore, be it resolved: That the Dominion Government be respectfully urged to make a thorough revision of the tariff, with the object of safeguarding and forwarding Canadian interests, and of transferring to Canadian workshops and mines the production of many of the commodities consumed by the Canadian people, but which are now imported."

The members of the Trades and Labor Association are absolutely right when they say that "the most important benefit by a Canadian customs tariff is to raise the standard of living among Canadian wage-earners."

THE STANDARD OF LIVING

I have said before, and cannot too strongly emphasize now, that we must all realize as a prime factor in this great question that we cannot afford to lower the standard of living in Canada. Labor must be as well paid here as in the neighboring Republic, or our people will continue, as in the past, to cross the border in search of better things. If, however, we do pay the same wages as those paid in the United States, then, naturally, we must protect the products of our workmen as efficiently as the United States protects the products of American workmen; and it is obvious, also, that in entering into mutual preferential arrangement with the United Kingdom, we must reasonably safeguard our Canadian workmen and employers against the lower wages and lower standard of living at present ruling in Great Britain.

COMMON SENSE PRINCIPLES

Let common sense guide us. The Canadian people must unite upon a policy for self-preservation and for permanent unity with the Empire. The Halifax platform of this Association is built upon common sense principles, and the policy we outline therein is born of practical experience in a practical age. Canadians can unite on this platform for the safety, prosperity, and progress of Canada and the Empire. As a people, we enjoy tremendous advantages, nationally and imperially. As a people, we possess advantages possessed by no other people either in ancient or modern times. The immigration to our country from the time Jacques Cartier planted the banner of France on the summit of our own Mount Royal has been composed of the men who form the conquering races of the world. France has sent her best, and the British Isles her choicest human products, all finally to be welded together in one common crucible.

Nationally, therefore, we have every reason to feel that if we are only true to our trust, true to ourselves, and true to the great Empire which affords us every liberty worthy of a free and forceful people, the future for us will have no fears.



MR. ROBERT MEIGHEN

OUR IMPERIAL HERITAGE

Imperially, we should remember, and our children should never forget, the magnificent privilege we enjoy of being subjects of a nation, of an Empire, which bears upon its banner no stain of national dishonor, and beneath a flag where oppression is impossible and justice reigns supreme.

Canada is proud to stand, and to stand as long as the Almighty sees fit to retain us, in the position we now occupy. Who dare impugn the loyalty of the subjects of an Empire which, for the sake of releasing from bondage one of her many millions of children, was not unwilling to sacrifice valuable lives and countless treasure. Let the hills and plains of Abyssinia speak. And, to-day, what do we see? Britain, despite differences of political opinion, rising as one man to protest and to act in defence of British shipping interests, no matter what the ultimate cost may be. Whenever the freedom of a British subject is in peril on land or sea, then it is that the great strong heart of Britain beats and will not be calmed until justice has been done.

Let us see that we appreciate the advantages we possess, and by every possible measure seek to safeguard and preserve them. (Prolonged applause).

MR. ROBERT MEIGHEN ON CANADA AND THE EMPIRE

The Chairman called on Mr. Robert Meighen, of the Lake of the Woods Milling Company, who proposed the toast, "Canada and the Empire."

Mr. Meighen said: In proposing the toast of "Canada and the Empire," let me say how proud I feel to be present this evening with our worthy President—as I am sure we all do—to do him honor. In him we have a worthy soldier of the Empire, who will fight five hundred battles for his country if needed, and never one against her. We all feel proud of the position he occupied, and the policy he advocated, on his recent visit to Great Britain, the source from which our Empire has taken its mighty flow and has spread over the earth.

A GREAT PROBLEM

With your permission, I would like to add a few words to what has been already said in connection with the problem that has engaged so much of our attention of late—here, in the Mother Country, in South Africa, in Australia and in the remotest parts of our world-wide domain—I refer, of course, to the problem of Imperial preferential trade. To my mind, the two greatest problems that have been placed before the Canadian people during the present generation have been, first, the building of the Canadian Pacific Railway, and second, the problem we are now discussing, that of binding all the parts of the Empire together by the ties of commerce.

The building of the Canadian Pacific Railway from ocean to ocean accomplished the great work of joining the provinces of the Dominion together from the Atlantic to the Pacific by a band of steel; and if that great undertaking had not been brought to a succcssful issue, we are all aware that the history of that part of the Dominion, which lies to the west of Lake Superior, might have been very different. There can be no difference of opinion about that now The building of the Canadian Pacific Railway has made Canada a nation.

A RETURN PREFERENCE

The problem of preferential trade which is now before us is equally important. The present Government has given Great Britain a preference in our markets, and very wisely so, as it has been a fine advertisement for our agricultural products in our natural market, and has already increased our trade there. But there is no reason why we should not have a preference in return; especially when that preference can be given to us without putting any burden upon the British taxpayer.

The Premiers of the different colonies at the conference in London in 1902 favored preferential trade within the Empire, and later, the then Colonial Secretary advocated that policy in the councils of his country. It is now well known that he was in favor of an increased tariff on the imports of foreign foodstuffs, and of allowing colonial foodstuffs to enter free.

The then Chancellor of the Exchequer, however, not only declined to carry out such a policy, but he took the most opposite view, and removed the duties that had been levied on all imported breadstuffs.

So vital, however, did Mr. Chamberlain consider this question to the permanent cohesion of the Empire, that he left the Cabinet of which he was the strongest member, took his political life in his hands and went forth as a missionary to convince the forty odd million inhabitants of the United Kingdom. So well has he succeeded already that his ultimate triumph is assured.

UNITED STATES OPINION

This is the conviction outside of the Empire, as well as within it.

Mr. James J. Hill, for instance, is a pretty good authority. He is President of the Great Northern Railway, his name is a household word both in America and Europe, and he speaks of business matters from first knowledge and vast practical experience, and not, as so many do who discuss business matters, merely as theorists.

Well, Mr. Hill, in a speech he made on January 20, before the Minnesota Agricultural Society, made use of the following significant words: "Mr. Chamberlain, a year ago, took a leaf out of our political economy, and started a campaign in Great Britain in favor of preferential trade, a campaign in favor of a tariff under which Great Britain would admit the products of her colonies free, and the colonies in return would give her freer access to their markets, and tax everybody else, Great Britain, too, agreeing to put a tariff or tax on imports of every other nation."

HOW IT AFFECTS THE STATES

"Now," commented Mr. Hill, "the agricultural interests of this country are enormous. Last year, as I remember, the figures furnished by the Agricultural Department of the General Government gave these figures at three hundred million dollars the product of the farm. Great Britain and her colonies buy from us seventy per cent. of all our exports. If they put a tariff of ten cents a bushel on our wheat, what will be the result? Remember that the surplus wheat we export fixes the price of the entire crop; that which we sell among ourselves and that which we sell abroad. The surplus grain always fixes the market price. Therefore, if your wheat is taxed ten cents a bushel, it means that you will have to pay eighteen millions of dollars on the one hundred and eighty million bushels you produce in your three North-western States."

"These conditions," continued Mr. Hill, "are not far from you. Every day you see in the newspapers that Mr. Chamberlain is winning his way. He has made more progress, indeed, in the first year than he expected to do in two or three when he first started on this movement."

MANITOBA'S ABILITY

"You may say," Mr. Hill told the representative agriculturists who were listening to him, "that the people of Great Britain have got to buy their bread from us or starve; but I will call your attention to the fact that twenty years ago Manitoba did not export a single bushel of wheat. Last year, on the other hand, it exported forty million bushels. At the rate that our United States farmers are going into that country, in about ten years they will raise all the wheat that Great Britain will need. Then the United States farmer will pay the tax for the privilege of selling in the British market. Either that, or you must hold your wheat, or find a new market. Every man living in the broad State of Minnesota would know it, and, if Mr. Chamberlain's plans are put into effect, you will know it greatly to your sorrow."

What I have already quoted is surely significant enough; but Mr. Hill added: "If any of you gentlemen think that I have painted the picture in too high a color, by calling your attention to what Mr. Chamberlain is doing, and what will be the effect that you may and must look forward to, I will be ready to answer for the faith that is in me. I know I am right. And I know that the time is coming when you will have to bear an additional burden of twenty to thirty million dollars a year in your three North-western states, unless you can find a new market for your food-stuffs."

WHAT IS CANADA DOING?

Now, I have quoted so much of Mr. Hill's memorable speech because I am convinced that he has seized the truth of the matter, and because I want to apply what he has said to ourselves. I want to ask this influential body of business men, when Mr. Hill is cautioning the United States farmer as to what is about to overtake him, and placing the advantages that the Canadian farmer would enjoy under a British preferential tariff—I want to ask ourselves, what are we doing to strengthen the hands of the statesman who is fighting our battles? What are we doing to strengthen the hands of the one who, I believe, is the foremost Anglo-Saxon statesman living? What are we doing to support the policy of the man who, even without our assistance, will undoubtedly win in the end?

PARLIAMENT SHOULD SPEAK

You are aware that many of the leading opponents of Mr. Chamberlain's policy in Great Britain deny on the public platform that Canadians are in favor of preferential trade. That is not true, as we know; but it would immensely strengthen the hands of the British statesman who sees the inevitable result that must follow if that policy is not carried out, if the Canadian Parliament were to put itself on record in favor of that policy. Our Parliament, so far, has declined to advocate a policy that would benefit not only the great farming class of this country, but the manufacturing and every other interest equally as well. What is the reason that they will not advocate a policy in favor of the Canadian farmer who endows our universities, who builds our colleges and our schools, who supports the clergyman, the lawyer, the doctor and the business man, and is the foundation upon which all our enterprises are based?

I have no doubt that the farmers in this country are watching with keen eyes the action of their representatives, and I have strong hopes that, when the time is ripe, they will see to it, apart from any political issue, that they will send men to Parliament who will, in their judgment, stand up and defend what they are well assured is wholly in their interests.

PASS A RESOLUTION

It is true that it has been said in Parliament, and on both side of the House, that we Canadians are in favor of preferential trade. But, if so, why does not Parliament pass a resolution favoring such a policy? I know that the position is taken by some of our statesmen and politicians, that they have no right to advocate it, because it is a political question. I maintain, however, that it is nothing of the sort. To me it seems very clear that it is an economic question, pure and simple. Even in the Mother Country, the two great parties of the State are divided on this question. There are Liberals who favor Mr. Chamberlain's campaign, and there are Conservatives who are against it. I say, without fear of contradiction, that it is not a political question. It is an issue between free trade and protection, if you like, an issue between the free trader and those who are preaching commercial salvation to the British nation and to the Empire; but it is not, emphatically, a political issue, in the sense that the term politics is usually understood.

On February 21st, 1902, as many of the gentlemen now present will recollect, I had the honor of moving a resolution in favor of preferential trade at a special meeting of the Board of Trade. At that meeting I quoted the fact that a deputation from the Millers' Association of Great Britain waited on the Chancellor of the Exchequer and pointed out to him the mode of procedure they would advise to be adopted in the levying of a tax on foodstuffs. Also, that a correspondent at that time pointed out to me that the colonies should watch the legislation closely, as the mode of levying the tax might be against their interests; and he further informed me that the feeling in favor of the colonies was of such a nature that any suggestion that might be made by them would receive due consideration, and would have great weight with the Government in determining its policy on that question.

A short time afterwards the duty on foodstuffs was imposed, and the colonies were not exempted. Our foodstuffs paid the duty the same as those of the foreigner. About a year after the duty was imposed, the late Mr. Hanbury, President of the British Board of Agriculture, made a speech at Leicester, in the course of which he showed that the duty on imported wheat and flour neither cost the consumer a penny more, nor did it raise the price of bread. But, on the other hand, it added to the revenue of the country by hundreds of thousands of pounds, all of which the foreign and colonial producer paid. He also remarked in a general way, that it was

very interesting indeed to discover that, without injuring the home consumer, they could make the foreigner pay for a good many articles which he sent to Great Britain. In that connection he said that the corn duties had been a valuable object lesson.

And here I want to emphasize that our public men took no active part to prevent the duty from being imposed on our exports to Great Britain in 1902, and it is beyond question that the Canadian producer paid that duty.

SUSTAIN CHAMBERLAIN

Neither at the present moment are our public men taking any stand or part in Parliament to sustain the champion of the colonies in favor of admitting colonial products free to the great consuming market of the world. I am convinced, as Mr. Hill and many other students of the situation are convinced, that Chamberlain will win as surely as that the sun is in the heavens. Chamberlain's policy will carry, and as we have been apathetic and have not striven to endorse his policy in the House of Commons, so we may find in the future that Mr. Chamberlain's policy of taxing foreign imports may be applied to ourselves, and, if so, we shall not receive any of the benefits that might so easily have been ours if we had given him official support.

IMPERIAL DEFENCE

Allow me to briefly refer to the fact that we are not now contributing our fair share towards the defences of the Empire, and I hold that it is our duty to come out squarely and at once upon this question. However, when the Chamberlain policy is put in force, and when Great Britain taxes all our imports, then we shall contribute very largely to the British revenue, and the lowest possible taxation that we can escape when that policy comes into force will amount to many millions of dollars. We are straining at a very little fly now, but eventually we may have to swallow a large-sized camel.

Our exports to Great Britain for the fiscal year of 1903 were one hundred and twenty-five millions of dollars. Now, if Chamberlain's policy of taxing imports ten per cent. is applied to the colonies, our contribution for the fiscal year would have amounted to twelve million five hundred thousand dollars. It is not presuming too much to say that, inside of eight years, our exports to Great Britain will be three hundred million dollars. If we are not granted the preference, we will pay, as Mr. Hill pointed out, a taxation of twenty-five millions of dollars for the privilege of selling in the British market. Can we object to Britain taxing our exports ten per cent., while we are taxing theirs twenty-two and a half to twenty-five per cent.? We are, under present conditions, truly straining at a gnat, and we will without doubt swallow the camel.

PEOPLE SHOULD INSIST

In conclusion, let me say, that I am hopeful that the people of Canada will insist upon a resolution being passed in Parliament in favor of the policy that would so enormously benefit the great mass of agriculturists in this Dominion, and every Canadian citizen. To say that the question is a political one in Great Britain, and to make that the excuse for ignoring it, will not do. There was a political issue, you will remember, in which the Parliament of Canada did interfere. In that great political issue that was before the people of Great Britain, Canada stood up and passed a resolution in favor of a policy that a great majority of my countrymen were in favor of, viz., Home Rule for that lovely Emerald Isle, that green isle where ever green shall be its groves, and bright its flowery soil, where first my childish spirit learned to love its country and its God.

HON. RAYMOND PREFONTAINE

Hon. Raymond Prefontaine, Minister of Marine and Fisheries, was the first gentleman called on by the Chairman to respond to the toast of "Canada and the Empire."

Mr. Prefontaine desired to point out very clearly that his presence at the banquet was owing to his friendship for the guest of the evening, and was not to be construed in any official or ministerial manner. He was there simply as a friend of Mr. Drummond. Referring to the visit made by Mr. Drummond to the United Kingdom, Mr. Prefontaine said that he had showed himself to be "up to the mark" in bringing the great resources and advantages that Canada possesses before the minds of the British people.

With some of the proposals put forward by Mr. Drummond, in his speech, Mr. Prefontaine said he was quite in accord. With others, he was not; and he reserved to himself the right of difference. "I will not tell you the ground of difference," said the speaker : and there was a roar of laughter from the crowded room.

ELECTIONS WITHIN SIX MONTHS

In regard to the proposals laid down by Mr. Drummond especially regarding tariffs and preferential trade, the people of Canada would, without doubt, have an opportunity within, say six months, of saying whether they were acceptable, whether they were to be modified, or whether things in this respect were to remain in statu quo.

He admitted that the claims of the Canadian manufacturers as put forward by Mr. Drummond and Mr. Meighen, deserved consideration; and he could assure them that they would receive that.

NO FIXED PRINCIPLE

There is no fixed principle in the government of a young country declared the speaker. "In this, we are no different to other new and young countries. We take the best means in our opinion for the advancement of our country ; but we are learning every day, and are profiting by the examples set us. I would point out however, that we must not be guided by ideas that come from any other country that is not specially interested in our welfare. All true Canadians are ready to work for the strengthening of the ties that bind Canada to England; and to this end every true son of the Dominion will strive."

A BUSINESS QUESTION

Regarding the preferential tariff, Mr. Prefontaine said: "It is all very well to say that politics govern these things. Politics govern a great many things; but in this regard, it is more a practical business question than anything else. The practical business men of Canada when the time comes must decide."

R. L. BORDEN

Mr. R. L. Borden was the next speaker to the toast of "Canada and the Empire," and spoke briefly.

At the outset, Mr. Borden took the Minister of Marine and Fisheries to task for apologizing for what he (Mr. Prefontaine) was pleased to term his imperfect command of the English language. There was, in the opinion of Mr. Borden, no need to make any excuses in that regard, but perhaps Mr. Prefontaine was speaking "with his customary naval reserve." (Laughter.)

COMPLIMENTS MR. DRUMMOND

Turning his attention to the guest of the evening, Mr. Drummond, Mr. Borden said that both sides of the House of Commons had been pleased to witness the admirable way in which Mr. Drummond had carried the banner of Canada to the people of the British Isles. The advantages of Canada had, through the instrumentality of Mr. Drummond, been put clearly and succinctly before the people of the Old Land. "I appreciate as much as any one," said Mr. Borden, "the very great advantages that came to this country owing to the visit of the delegates to the Chambers of Commerce of the Empire held in this city in August last; and I also think that the visit of Messrs. Ames, Hodgson and Drummond to England, has done great good to Canada." (Loud cheers.)

ADEQUATE PROTECTION NEEDED

Mr. Borden then turned his attention to the trade question, and pointed out that unusual conditions existed in this country. In manufactured goods, Canada was the best customer of the United States. This country was full of industries waiting for developments, which were quite capable of being extended. If this was to be done, it was apparent that some form of adequate protection should be adopted.

"I think," said Mr. Borden, "that I have heard that phrase 'adequate protection' before. (Laughter.) I have often preached from that text; and no doubt you will in future often have further opportunity of hearing me." (Cheers.)

PREFERENTIAL TRADE

Regarding preferential trade within the Empire, Mr. Borden said: "It is necessary that some general principle should be estab-

lished on each side of the Atlantic. When that is done, the problem resolves itself into a question for the business men of the whole empire to settle; and I believe that problem will be solved on principles advantageous to the whole empire.

"I was reproached some years ago for advocating a policy of adequate protection for the industries of this Dominion, as well as a system of preferential trade. I stand here to-night, however, and say that developments have proved, and pronouncements have been made, that that policy in the opinion of men occupying the highest places in both political parties in Canada is the right one for this Dominion. That is to say, on the one hand we give to the legitimate industries of this country, which we desire to see flourish and increase, such protection as they desire; and also give to the manufacturers of the Old Land a preference against the manufacturers of foreign countries, such as would give to British manufacturers a substantial hold on the Canadian market.

OUR SELF-GOVERNMENT

"There is a fear in some sections of this country that a policy of this sort may, in some way, interfere with the blessed privilege of free government which we now enjoy, and which privilege we never intend to give up. It is, of course, necessary to carefully weigh these opinions, and to give ear to these fears; but I, personally, do not think that there is any danger in our entering into what is nothing more than a reciprocity treaty with the United Kingdom.

"Was there any idea that a reciprocity treaty with the United States would in any way interfere with self-government in Canada? No. Then why should that fear exist so far as Great Britain is concerned? Do we not, at the present time, give a preference to the Old Country?"

IMPERIAL DEFENCE

Referring to the remark made by Mr. Drummond, as to the part that Canada should take in the defence of the Empire, Mr. Borden said Canada had a great deal to do in the way of perfecting the defences of the country. "I am as willing as any man in this country," he said, "to see Canada pay her proper share in the defence of the Empire."

Mr. Borden closed his speech with an invitation to Mr. Drummond to think seriously of entering public life. "We want business men in Parliament."

HON. L. P. BRODEUR ON THE PROSPERITY OF CANADA

Hon. L. P. Brodeur, also replying to the toast of "Canada and the Empire," spoke of the prosperity of Canada and quoted figures of imports and exports to show that in the last five years these had increased, in proportion, more than those of any country in the world. The Government, of which he was the youngest member, had tried to do its best for the progress of the country. Perhaps it might have made mistakes, but it seemed to him that it had proved to the business people of the Dominion that it was patriotic and wished to work for the best interests of the country.

THE GOVERNMENT AND DEFENCE

Something had been said about our obligations to the Empire and our contributing to its defence. In that respect, the Government had in late years done much. When it came into power in 1896, the expenditure on the militia was about $2,000,000 a year, and now it was almost double that. In making this increase, we were contributing in a large measure to the defence of the Empire, because when we provided for the defence of Canada, we provided, at the same time, for the defence of the Empire.

Canada, said Mr. Brodeur, was more prosperous than any country in the world.

NO TRUST WILL CAPTURE CANADA

Regarding commercial matters, Mr. Brodeur declared that any trust that tried to capture Canada would receive scant courtesy, and perchance a severe blow.

"I will always uphold that we are not merely a colony, but a part of the Empire; and other nations must respect us as we respect them."

F. D. MONK, M. P.

Mr. F. D. Monk, M. P., also spoke briefly to the toast of 'Canada and the Empire.' After congratulating Mr. Meighen and Mr. Drummond on the excellent, businesslike speeches they had made, he gave expression to the regret that business men, as a rule, did not take any interest in politics. "I have listened with a great deal of profit to many speeches delivered on commercial and trade matters by business men. We have too few of them in Parliament, and desire more."

Mr. Monk believed it to be to the great interest of the Dominion to remain part and parcel of the British Empire, and the time had arrived when it was necessary to reconsider, to a certain extent, the relations which had hitherto existed between the Mother Country aad her great self-governing Colonies.

Mr. Meighen was not quite right in saying that the subject had not engaged the attention of the public men of this country, for as far back as 1882, Mr. McNeil, then a member of the House of Commons, introduced and caused to be adopted a resolution favoring mutual reciprocal trade within the Empire, and since then much progress had been made towards the solution of the question. It was a very vital question, and it must be settled, but it required to be approached and studied with great care and an infinity of detail before any finished plan was laid before the public.

Before the great principle was adopted, they must begin to convince the electorate, not only of this country, but of England. This was a work in which those not afflicted with the cares and responsibilities of public life could do much to convince those who would ultimately be called upon to decide the question. In the meantime, let us do what we could to develop our own country and make it the great country that Providence intended it to be.

OTHER TOASTS

"Our Guests," was proposed by Mr. J. J. McGill and responded to in humorous addresses by Messrs. H. Cockshutt, Ontario, Vice-President Canadian Manufacturers' Association; R. S. White, Collector of Customs, Montreal, and R. A. Donald, of Toronto.

Mr. Robert Munro proposed the toast "Our Chairman," and Mr. Ballantyne replied briefly.

ROSSLAND MINERS' UNION FINED

A case of more than usual interest was tried a few weeks ago in Victoria before Mr. Justice Duff and a special jury. It was an action for damages brought by the Centre Star Gold Mining Co. against the Rossland Miners' Union for loss suffered by the plaintiff through the acts of the Union in connection with the strike of 1901. The case for the plaintiff company was presented by Sir Charles Hibbert Tupper and Mr. Galt, and the hearing lasted for several days.

In the course of the address by Mr. Galt, it was shown that the union had maintained a close watch over all avenues of entry to Rossland and the mines, in order to prevent any non-union men coming in to take the place of the strikers. By virtue of this action the mine owners had found it impossible to secure labor for their properties. Mr. Galt also made it clear that the Western Federation of Miners had sent large sums of money from Denver to the Rossland Union for the purpose of aiding in the strike.

A large number of witnesses were examined on both sides, and lengthy addresses delivered to the jury by the counsel. After due deliberation the jury awarded $12,500 damages to the company, on the ground that the Federation had used illegal means in conducting its strike at the company's mine, and had wrought detriment to the company's business to the amount granted as damages.

The case is one of the first of the kind to be tried in Canada and will prove of great value as a precedent in establishing the liability of Trades Unions.

Labor Column

SCARCITY OF LABOR

THE latest report prepared by the Canadian Manufacturers' Association dealing with the labor situation in Canada shows that in the factories and workshops of members of the Association alone there is an immediate demand for 6,717 additional hands. Of this number 2,521 are men, 859 boys, and 3,337 females, distributed as follows among the different provinces.

	Men	Boys	Females
Ontario	1,494	816	2,979
Quebec	380	32	179
Maritime Provinces	386	11	44
Manitoba	6	—	135
British Columbia	255	—	—

In the list of firms contributing to this total nearly every line of trade is represented. In some branches of business the need for help is of course more urgent than in others, though generally speaking skilled labor of almost every kind seems to be in considerable demand. Manufacturers of agricultural implements are asking for 112 more hands, the boot and shoe makers want 78 men and 115 women ; 57 men are wanted in our carriage factories ; 84 machinists, 29 sheet metal workers and 72 stove moulders (exclusive of apprentices) are wanted in the iron and steel trade ; the jewellers require 53 extra men ; the tanners 25 ; the paper makers 62 ; the furniture makers and upholsterers 67 ; the cabinet makers 32 ; the stone and marble cutters, 160, etc. In the great majority of these cases the employers have stated that they anticipate considerable difficulty in securing the help which is so badly needed. Unskilled labor, on the other hand, is for the most part readily procurable, though the canners of Ontario, who are calling for 120 men, 510 boys and 2,100 females, claim that they are never able to secure all the help they require. The fish canners of British Columbia are in need of 200 men, while 350 shantymen are wanted in the lumber camps of Nova Scotia.

One of the most remarkable features of the report is the large increase that is shown in the demand for female workers. Last January our factories reported a need of 2,189 working women ; to-day they need 3,337, or nearly 1,150 more than they did six months ago. Besides in the canning and boot and shoe industries already referred to, women are wanted for manufacturing garments, furs, twine and woollens, and as spinners and weavers.

The total figures as compared with those of January last show a net increase of 2,020. In other words, the manufacturing industries of Canada, so far as the Manufacturers' Association has been able to ascertain, are worse off to-day in the matter of help than they were six months ago. This may be partly accounted for by the fact that the opening of navigation, and the resumption of work on all kinds of out-of-door jobs has drawn away from our factories large numbers who were employed therein at the time of our last report. More probably, however, it is due in a much larger measure to the healthy expansion which the industrial enterprises of Canada are now experiencing. To keep pace with the steady development, more and more help must be brought into the country from outside sources. Had the tide of immigration been as extensive, and had it included as many skilled laborers, as the Trade Unions would have us believe, the deficiency must long since have been made up. That our immigrants have not been able to man our factories rapidly enough, that our needs are shown to be increasing rather than diminishing, is surely striking evidence of the very favorable condition of the Canadian labor market at the present time.

THE LABOR SITUATION IN AUSTRALIA

AN excess of emigrants over immigrants in ten years of 112,579 ! Such is the significant record of the State of Victoria, Australia, where everything has been done in the way of legislation that could possibly be done to make the country happy and to promote the interests of the working people.

EMIGRATION

Official statistics show that similarly unfavorable conditions exist in other parts of the Commonwealth. In South Australia the excess of emigrants from 1891 to 1901 was 18,219, and in Tasmania during the same period 1,948. Figures for the entire country show that the excess of arrivals over departures in this decade was only a trifle over 5,000, whereas between 1861 and 1891 the additions to the population of Australia amounted to 750,000. During the last two years the exodus has been even more marked. Thousands of the best people are leaving Australia every month for permanent residence in other parts of the world. During the first six months of 1903, according to official reports, no fewer than 16,327 persons left New South Wales alone for ports outside of the Commonwealth, the emigration exceeding the immigration by 2,116.

This, according to the *New York Commercial*, "is one of the immediate effects of socialistic labor legislation. The people who are leaving Australia are no mere birds of passage. They are mostly a class who have been born or long settled in Australia, many being steady, competent tradesmen ; not a few belonging to the ranks of master craftsmen ; others being farmers, station hands —in fact the very men of which the Commonwealth stands in most need. Scarcely any are trade unionists. The non-unionist under the new order of things has no place in Australia. The New South Wales Industrial Arbitration Court and the Victoria Wages Boards all refuse to recognize his existence. He must either join a trade union or starve.

"The Socialist Labor Party is the declared enemy of private enterprise and free labor. Only a month or so ago, a deputation waited on the State Ministry to ask that the manufacture of wire-netting might be included in the list of State industries, and it received a sympathetic reply. If a State wire-netting factory is established, all the private works must be closed. It is the same with the docks. Private enterprise is ready to supply the port of Newcastle with some dock accommodation urgently required, but the Socialist Labor party insists that it shall be provided at the cost of the State, and when it is pointed out that further State loans will be difficult to obtain, the reply is, 'increase the taxation on capital.' No wonder the capitalist as well as the laborer is anxious to leave a country where he is treated as an enemy of the public welfare."

ORGANIZATION OF EMPLOYERS

Manufacturers and others whose vested interests compel them to remain and see the matter through are thoroughly organizing themselves with a view to making a determined fight against this domination of Trade Unionism. Already a large number of Associations have been formed, mostly local in character, but these are gradually being drawn into one general Employers' Federation which bids fair soon to become one of the largest and strongest organizations of the kind in the world. It is known as the Central Council of the Employers of Australia and includes among its numerous ramifications : The Victorian Employers' Federation, The Employers' Federation of New South Wales, The Federated Employers' Union of Queensland, The Federated

Employers' Council of South Australia, and The Western Australian Chamber of Mines.

Each of these local federations under the direction of the Central Council is carrying on the campaign against unionism in a most vigorous manner. Public meetings are being held for an open discussion of the questions involved, petitions and remonstrances are being presented to the Commonwealth Parliament and the Provincial Legislatures, and literature of all kinds is being sent broadcast over the country for the purpose of enlightening and educating the people at large. A number of their leaflets and brochures have reached the office of INDUSTRIAL CANADA. They are characterized for the most part by a strength of expression and a bitterness of feeling seldom met with in similar literature published in this country, though no doubt extreme measures are called for in view of the industrial ruin with which Australia is threatened as a result of the tyrannical principles of the Labor party.

The platform of The Victorian Employers' Federation may be taken as fairly representing the attitude of the general body of employers. It aims (1) To promote economy in public expenditure ; (2) To oppose Government borrowings on any but clearly reproductive works ; (3) To oppose Government interference with private enterprise ; (4) To resist the nationalization of industries and manufactures, and also of land by excessive taxation ; (5) To oppose undue domination in Parliament of the Labor or any other party which has extreme socialism for its object ; (6) To support legislation promoting the development of agricultural, pastoral, mining, manufacturing, commercial and industrial pursuits by private enterprise, and to protect them from harassing legislation and taxation.

COMPULSORY ARBITRATION

In the pursuit of these objects their efforts for some time past have been mainly directed towards securing the defeat of the Conciliation and Arbitration Bill. The title of this bill is somewhat misleading. It aims to make arbitration not voluntary but compulsory. It is actually a proposal by the Government to establish a court to fix wages, hours and labor conditions for all employees engaged directly or indirectly in the production, transport and distribution of commodities. This court, among other things, is to be empowered to prescribe a minimum rate of wage for any given calling, such rate to be binding on every worker in the country engaged in that calling, irrespective of local conditions. The court may also direct that as between members of organizations of employers or employees and other persons offering or desiring service or employment at the same time, preference shall be given to such members, other things being equal. This clause practically means that employers and employees alike will have to form themselves into unions, in every case giving preference to unionists under penalty of a fine.

The bill is modelled closely after the New Zealand measure, where, according to Premier Seddon, the system is being ridden to death. It is there being used simply as a means to harass employers in every conceivable way. So far from preventing disputes, it has shown itself to be a regular manufactory for them. Workers have shown a disposition to rush off to the Conciliation Boards on the slightest provocation or on no provocation at all, for they realize that they have nothing to lose and possibly much to gain. In five years the Arbitration Court of New Zealand has had to deal with 365 disputes, whereas under the Voluntary Arbitration principle in South Australia there have been only seven disputes in seven years. Replying to circulars sent them, New Zealand employers have stated almost unanimously that the Act there has been productive of evil in creating disputes, in causing loss of time to employers and employees during the hearing of such disputes, and in causing interference with employers in the control of their business. Instead of promoting good feeling between employer and employed, it has thrown them into two hostile camps, and left nothing but strained relations where before the best of harmony prevailed.

Australian employers lay special stress on the argument that the Act will not stand the test of awards apparently adverse to the immediate interests of the worker. They point out that because an award had gone against the employees in a recent decision in the Waihi Mining Company's case, they said they must get rid of the judge, and a deputation waited on the Minister of Justice to have him removed.

In the practical working out of the principle of preference to unionism, the employer frequently suffers great injustice. In Sydney a captain was fined £50 for unloading his ship *with his own crew*, instead of employing land unionists. The Vacuum Oil Company was also fined by the Court for allowing one of its employees, who was not a journeymen cooper, *to tighten hoops on casks*. A Wellington employer was fined at the instance of a Journeymen's Union for not paying full journeymen's wages to his sons, who resided with him. Even the farmer must first have his sons join a Union before he can give them work on his own farm ! Mr. G. H. Reid, one of the supporters of the bill, could not help saying of it : " No man is more sensible than I am of the multitude of points in which the provisions of this bill seem to shock all one's instincts of personal liberty and all one's desire to see a free Commonwealth composed of free and independent subjects."

THE ALABAMA ANTI-BOYCOTT LAW

DOWN in Alabama the question of the legality or illegality of picketing and boycotting has been effectually disposed of by legislation. A law, based upon the report of the Anthracite Coal Strike Commission, has been passed which seems to cover the ground very thoroughly. The credit for its enactment belongs to the organization known as the "Citizens' Alliance of Birmingham," Ala. The Citizens' Alliance movement has recently spread over all parts of the United States, and from every quarter encouraging reports are being received of the good work which is being accomplished in checking the aggression of the Trades Unions. The Alabama Act reads as follows :

AN ACT

To Prohibit Boycotting, Unfair Lists, Picketing or Other Interference with the Lawful Business or Occupation of Others, and to Provide a Penalty Therefor.

Section 1. Be it enacted by the Legislature of Alabama : That it shall be unlawful for two or more persons to conspire together for the purpose of preventing any person, persons, firm or corporation from carrying on any lawful business within the State of Alabama, or for the purpose of interfering with the same.

Sec. 2. That it shall be unlawful for any person or persons to go near to or loiter about the premises or place of business of any person, firm or corporation engaged in a lawful business, for the purpose of influencing or inducing others not to trade with, buy from, sell to or have business dealings with such person, firm or corporation, or to picket the works or place of business of such other person, firm or corporation for the purpose of interfering with or injuring any lawful business or enterprise. *Provided*, that nothing herein shall prevent any person from soliciting trade or business for a competitive business.

Sec. 3. That it shall be unlawful to print or circulate any notice of boycott, boycott cards, stickers, dodgers, or unfair lists, publishing or declaring that a boycott or ban exists or has existed or is contemplated against any person, firm or corporation doing a lawful business, or publishing the name of any judicial officer or other public official upon any blacklist, unfair list or any similar list because of any lawful act or decision of such official.

Sec. 4. That it shall be unlawful to use force, threats or other means of intimidation to prevent any person from engaging in any lawful occupation at any place he or she sees fit.

Sec. 5. That it shall be unlawful for any person, firm or corporation to maintain a blacklist, or to notify any firm or corporation that any person has been blacklisted by such person, firm or corporation, or to use any other similar means to prevent such persons from receiving employment. Any person, firm or corporation violating any provision of this act must, on conviction, pay a fine of not less than fifty ($50.00) dollars, nor more than five hundred ($500.00) dollars, or be imprisoned not to exceed sixty days' hard labor for the county.

That all laws and parts of laws in conflict with the provisions of this act be and the same are hereby repealed.

★ Scientific Notes ★

THE MANUFACTURE OF GLUE

IN the work of the glue boiler there is little poetry or romance, and very much of plain matter-of-fact. It is a process interesting and instructive, a work calling for much scientific skill and mathematical accuracy in the construction of the mechanical means employed, and in the handling of the material.

What is glue? There is scarcely a school boy or girl of the present day who could not give a correct answer to the question, and yet few people there are who know anything of the manner in which this indispensable article is produced.

Glue does not exist ready-made in nature, but is the product of heat and water on nitrogeneous animal tissues, the solution so obtained setting to a jelly on cooling. The result of drying the jelly is a solid, glassy-looking product, known as glue, which varies in color from light yellow to black-brown.

From almost every creature belonging to the animal world can be produced a certain quantity of glutinous matter--in some cases as much as 60 or 70 per cent. Of course glue does not exist in the living organism, except under abnormal conditions, but is the product of several transformations, the first of which takes place in the drying of the hide after the death of the animal. Consequently many kinds of animal refuse find their way to the glue factory, and a surprisingly heterogeneous collection it is. Such things as clippings of hides, ear and tail pieces of ox, calf and sheep, the tendons and tissues of bone, cartilages, lymphatic vessels, and swimming bladders of many fishes, rabbit skins, even scraps of parchment, and many other apparently worse than useless things, all contribute their quota and are welcomed as so much grist to the mill by the glue boiler. To make the superior classes of glue, however, much discretion must be observed in the choice of raw materials—hide, ear and face clippings of the ox and calf being preferred. But the age of the animals has a very important influence on the quality of the glue manufactured. While from younger animals the product is, as a rule, lighter in color and more easily obtained, it does not possess the consistency and strength of the substance yielded by animals of maturer years.

PREPARATORY PROCESSES

The fleshings are far from being ready for the kettles when sent direct from the tanneries, as they require washing, and all particles of fleshy matter must be removed. Consequently all the material has to be thoroughly treated at the glue works before the actual manufacturing process begins. For this purpose every up-to-date glue works is supplied with large open-air pits built into the ground about four-and-a-half feet deep. In these the "stock," as it is technically termed, is steeped from two to thirteen weeks in "Milk-o'-Lime" and water, which dissolves any adhering fleshy matter, cleans the stock thoroughly, and also acts as an antiseptic. During the period of steeping, the stock is constantly stirred by workmen with long seven-pronged forks, to ensure that each little piece is submitted to the action of the lime.

When thoroughly cleansed the raw material is subjected to a further washing in clean, cold water mixed with acid, to neutralize the action of the lime. The second washing takes place in smaller pits called washers, which are fitted with a revolving drum, into which are fixed rounded, claw-like spokes resembling a reaper's hook, only that they are not sharp or pointed. This drum turns and the spokes beat the water much after the manner of a paddle of a steamer, except that they revolve backwards, instead of forwards, in order not to lift the material too much out of the water. In this way the second washing is done much more quickly, more effectively and more economically than by any other means.

The cleansing over, the stock is laid out to dry in the air till required for boiling. This completes the first stage in the preparation of the raw material for the manufacture of glue. From this point two methods are employed for the extraction of the glutinous product from the dried stock—the first, a simple primitive method which has been in operation for over one hundred years for the manufacture of the famous Scotch Glue, and the second, a modern method where inventive science enters largely into the process for producing all other special kinds of glue, according to the purpose for which they are required. By the former method the "stock" is put into loosely-woven sacks more like nets with extremely narrow meshes than anything else. These are then lifted by means of a crane into circular kettles or tanks filled with hot water, which are heated round the sides and on the bottom by steam pipes. After a time the action of the heat extracts the glutinous matter in the "pieces" and after concentration this is run off through pipes into another tank. From this the dark turbid-looking fluid is drawn off into what are technically called "coolers," in which the glue is allowed to settle till it takes the form of a soft pulpy jelly.

THE DIFFICULTIES OF DRYING

The jelly, when sufficiently solidified, is carefully taken out of the coolers, cut into small cakes by a cutting machine, and placed on nets preparatory to the next stage.

The process up to this point has been comparatively plain sailing, but now begins the difficult and delicate operation of drying—perhaps the most precarious part of the whole manufacture. The glue in its congealed state contains a considerable quantity of water, and to prevent decomposition or putrefaction during drying this must be got rid of as quickly as possible. For about eight months in the year the drying is accomplished in the open air. The stalks of nets upon which the cakes of glue are placed are covered by ∧ shaped roofs forming little covered sheds. The drying process is attended by many risks, for if the sun strikes the cakes of jelly while they still contain water they may become so soft as to sink through the narrow meshes of the net frames on which they lie, or they may dry so quickly as to prevent them from contracting to the proper size without numerous cracks and fissures. On the other hand, if frost supervenes, numerous cracks may be formed from the congelation of the water in the cakes, or a shower of rain may cause much extra work, worry and damage. Consequently there is need of careful supervision by day and by night to guard against these dangerrs. Once the cakes are sufficiently dry they are threaded on strings and hung up from the ceiling to thoroughly harden, a process which varies in the time required according to atmospheric conditions. Even when hard the article is not finished. It has a dull and altogether unattractive look, so in order to give it a better market appearance, each cake is dipped in water and rubbed over with a wet brush. This cleans the surface, and gives the cake that bright varnished look with which the public are familiar.

SPECIAL KINDS OF GLUE

For the manufacture of the special kinds of glue by the more modern methods, large square boiling tanks are used, provided with "jackets" or cases, which contain the steam to heat and boil the stock. In this case water is used in the boiling process, the resulting liquid being kept at a gentle heat until it has reached the proper consistency. It is then drawn off through a filter in the bottom of the tank. This glutinous solution is of course very far from being pure, and in order to obtain an adhesive of great strength and purity the large percentage of water added for boiling

purposes must be removed. The means employed is known as concentration and clarification, which consists in passing the solution through an evaporator, thereby concentrating the glue solution to the desired percentage.

After leaving the evaporator the glue solution undergoes a further clarifying process till it becomes a clear, light-colored liquid, ready for congealing. This solution is dried in a totally different manner from the Scotch glue, the coolers or troughs being done away with. The glue is drawn off in a department called the cooling chamber. This chamber is fitted with long rows of square tables with glass tops, which form receptacles about half an inch deep for the liquid glue. Between the bottom of the glass slab and the top of the table a constant flow of cold water is allowed to run, for the purpose of better congealing the glue solution. The liquid is tapped and run out of the little tanks on to the tables till it covers the slab to a depth of less than half an inch. It is then allowed to cool down to a jelly, and when stiffened to the proper consistency the large sheets of congealed glue are cut with a wet knife into the small cakes of the size required for use.

These are then dried by being placed on shelves in a chamber through which a strong current of gently heated air is kept constantly passing. The cakes are turned over from time to time, and as they become drier they are removed higher up on the racks to make way for those ascending from the cooling chamber.

Before placing the glue on the shelves to dry and harden it is customary for the manufacturer to stamp each piece with the name of the firm and the brand.

TRADE CATALOGUES

Filing and Record Systems.—A new catalogue by the Office Specialty Mfg. Co., Ltd., has just been published, and is of the same neat and tasty appearance that has characterized all the advertising literature of this enterprising firm. It is of a general nature, describing, illustrating and pricing all correspondence and record systems, supplies and cabinets—both sectional and solid construction—of their own manufacture. Less than three months ago the Office Specialty Co. had all their catalogues destroyed by fire, and they are to be congratulated on producing so creditable a volume in so short a time.

Pumps.—A new catalogue from the R. McDougall Co., Ltd., Galt, Ont., contains nearly 200 pages of descriptive matter on the subject of hand and power pumps, and hydraulic and pumping machinery of all kinds. Every style is clearly illustrated, and the prospective customer is told the particular kind of work for which each variety is best adapted. The introduction contains a number of useful tables and formulæ, by means of which the capacity per stroke or revolution for each size of pump may be readily computed.

Saddlery Hardware.—The McKinnon Dash & Metal Works Co., Limited, St. Catharines, Ont., have placed upon our file a copy of their Catalogue No. 1, dealing with hames and saddlery hardware. It is a neat, business-like little volume, evidently designed for circulation among tradesmen who know exactly what they want to buy. The same company also manufacture a full line of carriage top hardware, whip sockets, carriage dashes and carriage fenders, which are made the subject of a separate publication.

Safes.—The Goldie & McCulloch Co., Ltd., have issued a neat little brochure directing attention to the severe test to which their safes and vault doors were submitted in the recent disastrous fire in Toronto, and to the satisfactory manner in which they came through. A number of letters from fire-sufferers are reproduced, accompanied in each case by a photograph of the safe after it had been opened, and the fact that the contents were invariably found to be intact speaks well for the ability of the Goldie & McCulloch safes to afford protection against fire.

Scales.—One would hardly suppose that the ordinary platform scale was capable of much variation, but a glance through the pages of the Gurney Scale Co's new catalogue shows that different scales are designed to meet the individual requirements of almost every trade. The grocer, the butcher, the dairyman, the miller and the foundryman, all have their own peculiar needs, and all are successfully catered to by the standard lines of this well known Hamilton firm. It is their proud boast that whatever you wish to weigh, whether it be a letter or a freight car, the necessary apparatus can be had from their factory.

Show Cases.—The Dominion Show Case Co., Toronto, have issued a new catalogue and price list containing full descriptions of their high grade show cases, wall cases, bank and office fittings, drug and jewellery store fixtures, mirrors, bent glass, etc. Illustrations are given of the different styles and designs referred to, while at the back of the catalogue are a number of half-tone engravings showing interiors that have been designed and manufactured by the Company. A copy will gladly be furnished to any merchant on application.

Spraying Machines.—The Spramotor Company of London, Ont., are distributing an effective piece of advertising literature, entitled "A Gold Mine on Your Farm." It is a booklet of about 80 pages, printed on coated paper and freely illustrated. The cover design represents a farmer in the act of spraying his trees, the ripening fruit of which falls to the ground in the form of golden dollars. The gold mine consists in the difference between what his fruit trees and plants have yielded, and what they can be induced to yield, under the magic touch of the Spramotor. The booklet gives an extensive review of the various ills that vegetable life is heir to, and contains much useful information regarding the efficacy and cost of the different spraying solutions and the best methods of applying them. Besides being used for spraying fruit trees, the Spramotor can be employed in a number of practical ways, such as killing wild mustard, relieving live stock from the annoyance of the horn fly, as well as in disinfecting, painting and whitewashing.

Trunks.—A very artistic catalogue has recently been issued by the Hill Mannfacturing Co., of Quebec, manufacturers of all kinds of trunks. It is a booklet of 35 pages, bound in a stiff red cover and lettered in black and gold. A neat effect has been obtained by printing in black over an impression of bisque, leaving a white margin around every page. The usual line of canvas and leather bound trunks are illustrated, besides steamer, bureau and specially designed sample trunks.

NEW ENTERPRISES LAUNCHED

The past month has witnessed a large addition to the list of incorporated Canadian companies. Among the more important concerns to receive charters were:

Canada Optical Company, Ltd., Montreal, $20,000; Montreal Copper Co., Ltd., $150,000; Canadian Trade Journals, Ltd., Montreal, $10,000; Resources Publishing Co., Ltd., Montreal, $100,000; The Canadian Hasna Cement Co., Ltd., Montreal, $500,000; Canadian United Milling Co., Ltd., Montreal, $150,000; The Canadian Timber Co., Ltd., Ottawa, $250,000; E. N. Heney Company, Ltd., Montreal, $200,000; The Mineral City Fire Clay Co., Ltd., Moose Jaw, $78,000; The Hawkesbury Electric Light and Power Co., Ltd., Hawkesbury, Ont., $100,000; The A. D. Gall Petroleum & Chemical Co., Ltd., Montreal, $200,000; The Montreal Packing Co., Ltd., Montreal, $500,000; The B. C. Plate Glass & Importing Co., Ltd., Vancouver, $25,000; The Canadian Michigan Gold Mines, Ltd., S.S. Marie, Ont., $1,000,000; The Empire Salt Co., Ltd., Sarnia, $50,000; The Arden Cement Block and Building Co., Ltd., Arden, Man., $20,000; The Gordon-Mitchell Drug Co., Ltd, Winnipeg, $150,000.

Industrial Activities OF THE MONTH

Contributions of interesting news items are invited

THE MANUFACTURERS OF CANADA



NO. 4. MR. D. W. ROBB

David Wendell Robb, son of the late Alexander Robb, founder of the Robb Engineering Company, was born at Amherst, N.S., May 9th, 1856. His early education was received at the Cumberland County Academy, after which he travelled extensively through Great Britain and the United States. On his return he entered the mechanical department of the Robb Works, where he was given a thorough practical training in all branches of the trade. In 1896 he assumed the management of this department, and in 1897, on the death of his brother, F. B. Robb, the entire business passed under his charge.

Although by natural taste and training a mechanical rather than a business man, by consistent adherence to his strong conviction that the production of one or two special lines of manufacture rather than a more general range of production leads to the best results, Mr. Robb has been able to make special designs of engines for electrical work that have commanded a ready sale in all parts of the world. This idea of specialization was recently carried still further by the organization of the Robb Mumford Boiler Co., for the purpose of manufacturing in the United States this well-known type of Canadian boiler. Of this company Mr. Robb is President, besides being Managing Director of the Robb Engineering Company, Ltd., of Amherst.

During the past year Mr. Robb has acted as Vice-President for Nova Scotia of the Canadian Manufacturers' Association. He is an ardent advocate of the protective tariff principle, which he believes to be the surest means of promoting the growth and productiveness of a young country like Canada. He is a member of the American Society of Mechanical Engineers, the Canadian Society of Civil Engineers, and the Canadian Mining Institute.

THE Iron and Steel Co. of Canada, Ltd., Belleville, Ont., began operations in their new rolling mills on July 18th last. For the present they will confine themselves to the manufacture of bar iron, washers and spikes.

Negotiations have been entered into by the International Harvester Co. for the purchase of the Cockshutt Plow Co. of Brantford.

A company known as the Canadian Adjustable Bearing Co. has been formed in Windsor, Ont., for the purpose of manufacturing adjustable bearings for steam and electric cars. Mr. J. F. Harrington, of Detroit, is President, and the paid-up capital is $100,000.

The Laurentide Mica Company, which is controlled by the Westinghouse Company, is building a large new factory in Ottawa for the manufacture of mica for electrical purposes.

The Corundum Refiners, Limited, will immediately begin work on a one hundred ton factory at Renfrew, Ont., which will be put in operation next summer. The company has 1400 acres of corundum lands in Raglan Twp., Renfrew.

The A. J. Burton Saw Co. is the name of a new concern that recently commenced operations in Vancouver. They will manufacture all classes and varieties of saws, and expect to drive a profitable trade among the lumbermen of British Columbia.

Warwick Bros. & Rutter are building a new factory near the corner of King St. and Spadina Ave., Toronto. It will be fitted up with all the requirements of a thoroughly modern printing office and bindery.

The new Board of Directors of the Consolidated Lake Superior Co. have appointed Mr. Cornelius Shields to the General Managership, and the big works at the Sault have once more been put into operation. The steel plant, pulp mill, charcoal plant, veneer mill and machine shops will soon be working to their fullest capacity and other branches of the allied industries will be started later on.

The insolvent estate of Messrs. Saulnier, de Celles and Altman, proprietors of the Union Hat Works, Brockville, was disposed of by tender on July 11th to the Walthausen Hat Corporation, of South Norwalk, Conn. Operations have already been resumed, and it is the intention of the new owners to erect an addition with the necessary equipment for the manufacture of hard hats.

The Canadian Smelting Works, at Trail, B.C., have inaugurated a new industry in Canada by manufacturing completed lead products. They are now in the market with lead pipe and sheet lead, and expect later on to establish corroding works, both at Montreal and at Trail. Their smelter and refinery provide employment for about 350 men.

The Canadian Pacific Lumber Mills at Port Moody, twelve miles from Vancouver, B.C., were totally destroyed by fire early in July. The loss will be about $125,000.

It is stated that it is the intention of the Canadian Government to erect a thoroughly modern steel elevator at Port Colborne, Ont., the Lake Erie entrance to the Welland Canal. It will have a capacity of 2,000,000 bush., and will cost approximately $1,250,000.

The Stratford Carriage Company, who recently bought out the business of E. Borland, Tillsonburg, will build a new factory and blacksmith shop at Stratford.

Walker & Clegg have been at work for some time on their new furniture factory in Wingham, Ont. It is expected that they will have everything in running order in a few weeks.

The Pittsburg Coal Company have purchased a 35-acre site in Fort William, Ont., on which they will erect a coal plant capable of handling 1,000,000 tons a year. It is their intention to make Fort William a distributing centre for their western trade.

The T. Eaton Co., Ltd., of Toronto, are making arrangements for the establishment of a branch in Winnipeg, which will be used as a distributing point for their growing mail order business in the west.

James J. Hill and his associates are reported to have secured a controlling interest in the Granby Mining Co., operating the big properties at Phœnix and the smelter at Grand Forks, B.C.

The business of the Albion Iron Works Co., Victoria, B.C., has been taken over by the firm of Bullen Brothers, and will hereafter be conducted under their management in connection with their constantly growing ship-building industry.

The Packard Electric Company, of St. Catharines, have found it necessary to remodel their entire plant in order to keep pace with the growing demands of the trade. When the alterations have been completed, it is stated that they will have the finest facilities for turning out lamps, transformers and meters that modern manufacturing science can devise.

At the annual meeting of the Maritime Copper and Reduction Co., Mr. Geo. E. Trueman was elected President, Claude W. Price, Secretary; and George M. Sweeny, Treasurer, all of Moncton. It is the intention of the new concern to re-open the works at Goose Creek, St. John County.

Telfer Bros., Collingwood, are adding a three-story addition to their premises, putting in another large oven which will double their capacity, and making other extensive improvements in order to meet the increasing demand for their "Peerless" brand of biscuits. At Winnipeg they are erecting a five-story warehouse for their Western business.

W. Moore & Sons, Meaford, Ont., proprietors of the Meaford Rolling Mills, are developing a water power about a mile from town. They have a head of 55 ft., capable of generating 800 h.p. Work will shortly be commenced on the construction of their power house.

The Grand Trunk Railway Co. will build a new roundhouse in London East, which they expect to have ready by Dec. 1st. It will cover an acre of ground, and will cost $75,000.

The plant of the Metal Shingle & Siding Co., at Preston, Ont., was almost entirely destroyed by fire on July 15th, involving a loss of $40,000. A considerable quantity of made-up goods was saved, so that the company are glad to announce that they are still in a position to do business. The work of re-building will be begun at once.

The Crow's Nest Coal Co. have closed a contract for the erection of a zinc reducing plant at Fernie, B. C., to cost at least $100,000. It will be built by M. Ferneau, a French expert, who is now on his way to this country to complete the preliminary arrangements.

A company has been formed in Winnipeg with a capital of $2,000,000 for the purpose of building elevators and conducting a general grain business at Fort William and Winnipeg. It will be known as The Empire Elevator Co., and includes among its stockholders W. H. McWilliams, S. P. Clarke, Frederick Phillips and others.

Plans are well under way for the erection of a monster beet sugar plant near Calgary, N.W.T. U. S. Senator Gustavus Theden, who has the matter in hand, states that the factory will have an output of 140,000 lbs. of sugar per day, and will necessitate the bringing in of 700 families upon the irrigated lands of the C. P. R. for the production of the sugar beet.

Mr. Albert T. Weldon, formerly chief clerk in the divisional freight office of the Intercolonial Railway at Halifax, has been appointed Secretary of the Halifax Board of Trade out of a list of fifty applicants.

A new firm called the Ketchum Boat Company has been established in Ottawa. They will build canoes, launches and other kinds of craft.

Arrangements have been made between the Department of Militia and the Armstrong Gun and Ammunition Co., England, whereby the latter are to establish an ammunition factory in Ontario with a capacity of ten million rounds a year. The factory will be located in or near Ottawa, and it is part of the bargain that the cordite used in the ammunition shall itself be made in this country.

The plant of the old Mount Forest Manufacturing Co. has been purchased by the Cobban Manufacturing Co., Ltd., of Toronto, who will remove the picture moulding machinery to their factory at Toronto. The building will shortly be occupied by Messrs. Gibson and Robinson, of Mount Forest, for use as an undertaking supply manufactory.

The commodious factory building situate at 102 Adelaide st. West, Toronto, was recently purchased by Samuel May & Co., who have had it thoroughly remodelled from the foundations up. New and special machinery has been installed which will materially increase their output of billiard tables. Mr. May desires to extend an invitation to both city and out-of-town friends to look him up at his new address.

The Toronto Street Railway Company have recently placed an order with Sheldon & Sheldon, of Galt, Ontario, for two 180" fans for forced draft, to be used in connection with the Jones Stokers, which they have installed. These, together with the two other fans of the same size and make, which are already installed, will make the largest plant of this kind in Canada. The fans are of the three-quarter housing type, direct connection to engines, and have a capacity of approximately 90,000 cubic feet of air per minute each at two oz. pressure.

The Oshawa Wire Fence Co. have decided to increase their capital and extend their operations. It is a Joint Stock Company, comprising among its shareholders a large number of the farmers of Durham and Ontario Counties. Mr. F. L. Fowke, Mayor of Oshawa, is President, and T. H. Everson, Oshawa, Managing Director.

The Dominion Iron and Steel Co. now have about 1,800 men employed in and around their plant at Sydney. They will shortly commence work on the construction of a new iron yard between the open hearth and blast furnaces, which will facilitate the movement of material intended for shipment.

The Taylor-Forbes Company, Guelph, propose erecting three large additions to their present factory at a cost of $30,000. Two of the new buildings will be used for foundry purposes, and the third as a machine shop. It is said that when building operations are completed 300 extra hands will be added to the permanent staff.

The Dominion Lumber Co., of Bridgewater, N.S., will build a railway 25 miles long through their timber limits. It will connect with the Halifax and South-Western Railways.

The plans of the Backus and Brooks Co, who propose to develop a water power, and erect pulp and flour mills at Fort Frances, Ont. call for an expenditure of $5,000,000.

Another industry is to be added to the Brantford's growing list as a result of the decision of the Canadian Folding Collapsable Box Co. to locate there.

A shirt and collar factory has just been started in Berlin, Ont., by H. H. Hagen, who expects to employ about forty hands when he gets everything in running order.

The Kamloops Lumber Co. and the Okanagan Lumber Co. have amalgamated and hereafter the business will be carried on under the name of the former company. Their joint capital will be $500,000.

Foley Bros., of Montreal, have decided to erect a furniture factory at Fort William, and have already purchased sites for their buildings and for dwellings for their employees.

Foreign Trade News

DUTY ON CATALOGUES AND PERIODICALS

Australia.—The Customs treatment of catalogues posted to Australia has hitherto given rise to considerable dissatisfaction. In some cases they appear to have passed in free, while in other cases they have been detained pending the payment of the duty of 3d. per lb., leviable on advertising matter under the Commonwealth tariff. The Tariff Guide plainly exempts from duty catalogues and price lists being single copies from exporting houses for the use of merchants, but it is now officially stated that this exemption will be cancelled on September 1st next, on and after which date duty will be charged on all catalogues and price lists imported per post or otherwise, irrespective of to whom addressed. Magazines and periodicals will also be liable to the duty of 3d. per lb., which is applicable to all printed or lithograped matter of any kind for advertising purposes. The object of the Government in framing this clause was, it is claimed, to prevent trade catalogues and circulars from being printed abroad, but it seems more than likely that, if strictly enforced, the new regulation will not only prove a hindrance to trade, but will be the means of excluding a number of instructive periodicals which the people of Australia can ill afford to be without.

THE BAHAMA ISLANDS

INDUSTRIAL CANADA is indebted to Mr. B. W. Roberts, Nassau, Bahamas, for a copy of a general descriptive report on the Bahama Islands compiled by the Governor, Sir. G. T. Carter. The report deals with the islands from many standpoints and discusses their geographical position and formation, their soil and products, early history and Constitution, climate and meteorology, etc.

The Bahama Islands are very different in their formation from what is generally understood. The Bahamas are really an archipelago made up of 29 islands, 661 cays and 2,387 rocks. Andros Island, the largest, has an area of 1,600 square miles. The Island of New Providence, on which is situated Nassau, the most important city in the group, has an area of only 85 sq. miles. The population of Nassau is 12,534. The total population of the Islands is 55,190.

The Bahamas are of particular interest to Canadians at the present time as it is understood that the tenders asked by the government for the Canada-Mexican service will make Nassau a port of call. At present all merchandise from Canada goes via New York and the Ward line which runs a fortnightly service.

The total imports for the year 1902 are valued at £306,098 made up in part as follows: Spirits, £6,959; cotton, linen and silk, £44,524; earthenware, glass, &c, £40,394; tinware, hardware, &c. £10,147; flour, £39,733; butter and cheese, £7,893; lumber and shingles, £14,652; hay and oats, £4,452. The principal items of export are sponges £97,584, hemp, £37,574, and pineapples £36,957. The total exports for 1902 are valued at £207,601.

FOREIGN TRADE OF JAPAN

Notwithstanding the gathering war clouds and the industrial depression that marked the closing months of 1903 in Japan, the foreign trade statistics of that country for the past year show very substantial increases, both in imports and exports. The import figures, however, are not as satisfactory as would appear at first sight, as the increase is due chiefly to large receipts of foreign rice, consequent on the shortage of the native crop in 1902. Next to rice the most important increases are shown in sugar, flour, iron and steel manufactures, wheat, beans and wool, while serious decreases are noticeable in raw cotton and cotton manufactures. Of the principal exports cotton yarn, tea, coal and copper all show large increases, and except in the case of rice and floor matting there are no decreases of any magnitude.

The total imports and exports (exclusive of specie), for 1902 and 1903 are shown in the following table. For the sake of comparison the average for 1898-1901 is also given.

	Average 1898-1901	1902	1903
Imports	£26,566,737	£27,739,232	£32,374,250
Exports	21,372,757	26,368,320	29,553,374
Total	£47,939,494	£54,107,552	£61,927,624

An examination of the monthly returns shows that the greater part of the increase for 1903 is accounted for in the first eight months. Since the first of September the expansion has experienced a check, owing doubtless to the uncertainty of the international situation.

The following table shows the distribution of Japan's foreign trade in 1902 and 1903 among the countries chiefly interested.

	1902	1903
British Empire—		
United Kingdom	£6,912,080	£6,662,087
Hong Kong	2,892,116	3,209,664
India	5,550,282	7,960,527
Australia	494,523	462,720
Canada	408,651	349,943
Straits Settlements	1,013,000	861,763
China	8,925,084	11,275,331
France	3,269,650	4,020,755
Germany	3,118,640	3,282,368
United States	13,157,076	13,168,313
Dutch Indies	424,000	1,204,000
Belgium	773,000	823,000
Corea	1,888,000	2,110,000
Asiatic Russia	827,000	1,070,000

Of Japan's total imports, 39 per cent. come from the British Empire. The imports from the United Kingdom show a serious shrinkage in cotton manufactures, while from India there is a marked increase in the purchase of rice and indigo, though somewhat less cotton.

In both exports and imports Japan's trade with Canada is less than in 1902. In 1903 we took from Japan raw silk to the value of only £4,000, as against £106,000 the previous year, while Japan took from us salted salmon to the value of only £9,000, as compared with £38,000 in 1902. Canada is not a party to the "most-favored-nation" treaty with Japan of 1904, and our goods therefore have to enter under the statutory tariff. For this reason many of our manufactured articles are practically excluded, though in food products, pulp and lumber excellent opportunities are afforded for building up an extensive trade. The imports of flour into Japan are year by year becoming more important. Up to the present however there has been little demand for flour of the high quality of the Canadian product.

The United States is again one of Japan's best customers, though during the past year the trade between the two countries shows little expansion. There is a marked increase in the importation of United States flour, which has been off-set by important shrinkages in raw cotton and petroleum.

Next to the United States, China has the largest share of Japan's exports, and trade in this direction is steadily growing. From 1898 to 1901 the average exports to China were £3,681,312; in 1902 they were £4,781,434, while in 1903 they reached a total of £6,634,822. Cotton yarns constitute the principal item of increase. From China Japan purchases annually large quantities of beans, rice and wheat.

One of the most significant features of last year's report is the wonderful expansion of trade with the Dutch Indies, which has

been nearly trebled. This result has been brought about by the establishment of a new line of steamers, subsidized by the Dutch Government, to run between Java and Japan. The company, who have three steamers of 5,000 tons each on the line, are known as the China-Japan Steamship Co. Their head office is in Amsterdam.

MUSICAL INSTRUMENTS

Philippine Islands.—The people of these Islands are all madly fond of music, and in the towns, as well as in the country, workmen and artisans devote more time to playing their Instruments than to work. The shops in Manila do an enormous trade in guitars, mandolins, violins, cellos, flutes, brass instruments, etc. French goods are those which enjoy the preference, although there is also a small trade in German string instruments, and in United States wind instruments for bands. What pianos are sold come chiefly from Spain, but the French, German, and latterly the United States piano manufacturers are getting a share of this trade. There is also a small demand for organs.—*French Consul at Manila.*

Brazil.—There appears to be a market here for a good cabinet piano, purchasable here at from $500 to $750. The duties on such a piano are about $90 and the freight $30. It should be put together as far as possible with screws, or at least, not with glue ; it should possess a rich, full tone, which should be permanent, not becoming "tinny," and it must be able to withstand a very hot and very damp climate. The following information is absolutely necessary or the sending firm will waste time : Weight of piano, net and boxed ; price, net, f.o.b. New York.—*United States Consul at Para.*

WINDMILLS

Tunis.—Within the past five years windmills have come into very general favor in Tunis. Over 300 have been put into operation in that time, mostly of United States manufacture, and all are said to have proved advantageous and satisfactory. Railways, municipalities, and landed proprietors have adopted them. Up to the present they have been operated largely for pumping water, but now they are coming into use as a motive power for flour-mill machinery. The United States Vice-Consul reports that the demand is steadily increasing and it is very probable that in a few years they will be employed all over the country.

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

1 **Agencies—Bermuda**—A correspondent in **Bermuda** desires to act in the capacity of an advisory agent for firms desiring to enter that market.

2 **Dudley**—A manufacturers' agent with headquarters in **Dudley, England,** and travelling in Lancashire, the Midlands, and South Wales, and who calls on the iron mongers and chemists in these districts, desires to introduce Canadian goods. He mentions such articles as mangles, mowers, woodenware, enamelledware, builders' hardware, etc., etc. He states that he is in a position to handle almost any line that a chemist requires. References are forwarded.

3 **Great Britain**—A Canadian with an extensive connection among the best houses in Great Britain is able and willing to introduce goods of Canadian manufacture.

4 **London**—A young man in **London, England**, carrying on a small general agency business and in a position to accept further agencies of not too extended a character invites correspondence.

5 **Trinidad**—An agent for several European and American manufacturers in **Trinidad, B.W.I.,** offers his services to introduce Canadian goods. He already has a good connection with the trade. References are forwarded.

6 **Apples, (Fresh, Evaporated and Sun-Dried), Canned Salmon, Sardines and Lobsters, Cereals, Leather, Boots and Shoes, Cod Liver Oil, etc.**—A **Montreal** correspondent desires to get in touch with shippers of the above goods for export to Europe. He states that the demand in all the lines mentioned is good and a large amount of business could be guaranteed. References are forwarded.

7 **Badges, Emblems, Pins, Insignia, etc., for Masonic Lodges**—A correspondent in **Santiago de Chili,** asks for the names of manufacturers in a position to export the above lines.

8 **Barrel Staves, Headings, etc.**—A firm in **Liverpool, England,** is open to receive quotations f.o.b. Montreal on above.

9 **Brooms, Broom Handles, Turned Goods, Wash Boards, Clothes Pegs, and General Hardware**—A **London, England,** firm of manufacturers' agents established two years ago desires to represent shippers of the above on a commission basis. References will be provided.

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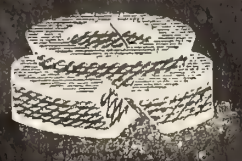
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10 **Cereals, Corn, Wheat, Maize, etc.**—A correspondent in **Genoa** asks for information regarding the exporters of the above lines. He states that now is a very opportune time to open business for the reason that the largest shipments are procured from Russia and that the Russian crop this year is estimated to be not more than one-tenth the usual supply.

11 **Desks, (Office)**—A firm in **Amsterdam, Holland,** is prepared to receive quotations from Canadian manufacturers of the above who can do export trade. Goods in knock-down state. Quotations f.o.b. Canadian seaport.

12 **Flour and Rolled Oats**—A firm of import and export agents in **Christiania, Norway,** who have been correspondents of the Manufacturers' Association for a number of years desire to handle Canadian wheat flour and rolled oats in the Scandinavian markets. Letters regarding the standing of this firm are on file in the office.

13 **Glace Kid and Calf Leather**—A correspondent in **London, England,** states that there is a good business open for Canadian manufacturers in the above lines who wish to do business in England. He states that Canadian export trade has up to the present been mainly in sole and upper leathers. Names of buyers will be furnished on application.

14 **Lobsters and Kitchen Chairs**—An **Australian** merchant with houses in Melbourne, Sydney and Freemantle and who already represents a number of Canadian manufacturers desires to secure the agency for a packer of lobsters and a manufacturer of kitchen chairs. Letters regarding the standing of this firm are on file in the office.

15 **Lobsters, (Canned)** (a)—A broker having a good connection for canned goods in **Great Britain** is able to place a first-class pack of Canadian lobsters with buyers of high class goods.

16 (b) A **Manchester** firm can handle a large quantity of first-class lobsters.

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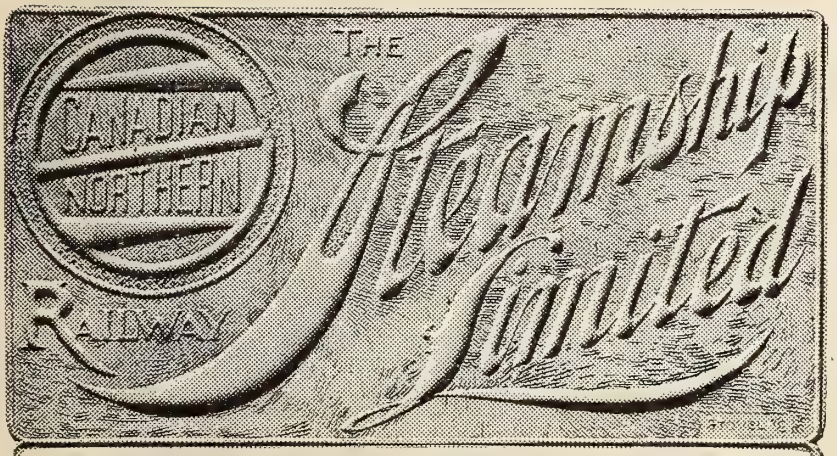
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17 **Lumber, Rough and Dressed, and Joinery**—A firm of importers and general commission agents in **Johannesburg** asks to be put in communication with reliable manufacturers and exporters of the above who wish to extend their business to the Transvaal. A full line of this class of goods is stocked.

18 **Mica**—An **English** importer is anxious to get into direct communication with actual owners of mica properties in Canada who are seeking a market for their output.

19 **Machines and Ovens for Biscuit Making, Evaporated Fruits, and Canned Goods**—A wholesale and manufacturing firm in **Copenhagen, Denmark**, established in 1880, desires to purchase the above for cash. A well-known bank is sent as reference.

20 **Ores**—Inquiry is made by a gentleman in England for names of parties in Canada who control ores suitable for the British market.

21 **Paper (Wrapping and News)**—A **London** firm of paper agents desire to get into communication with paper mills in Canada with a view to importing wrappings and news and various other papers. Also to act as buying agents for Canadian firms who import foreign-made papers.

22 **Pine (Oregon)**—Enquiry has been made for the addresses of mills in British Columbia producing "Oregon" pine, etc., for export.

23 **Pulp (Wood)**—A firm of merchants and colliery agents in **Hull, England**, seeks communication with a shipper of the above.

24 **Radiators**—A correspondent in **Newcastle-on-Tyne** would like to hear from Canadian manufacturers of radiators and other heating appliances.

25 **Steaks, Canned Cod**—A **Glasgow** house has a good opening for these goods if any Canadian packer can supply their wants.

26 **Typewriters**—A **Norwich, England**, firm writes that there is room to introduce a high grade Canadian-made typewriter and asks to be put in touch with manufacturers of the same.

27 **Wheels (Cart)**—A gentleman well-known to the Association in **Trinidad, B.W.I.**, makes enquiry for steel cart wheels with tires of about five or six inches wide. He would be pleased to receive catalogues and quotations, and if possible samples. He states that a nice business could be done in this line.

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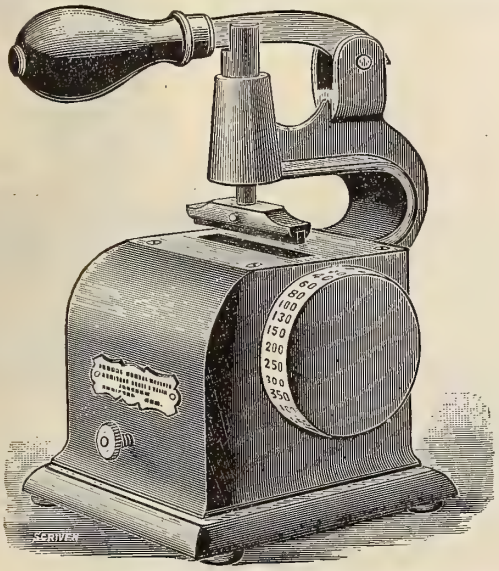
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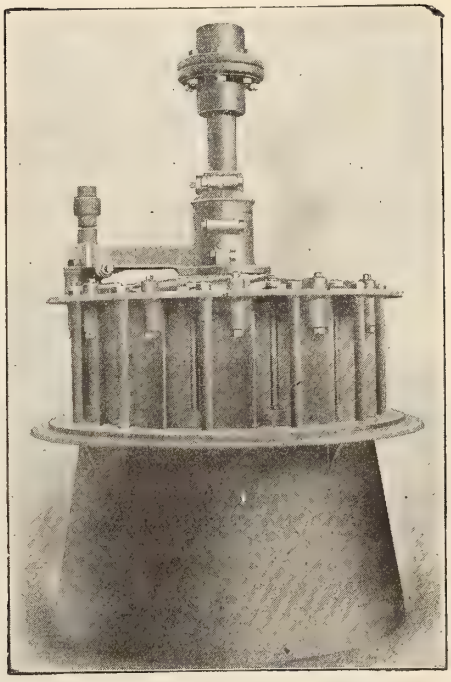
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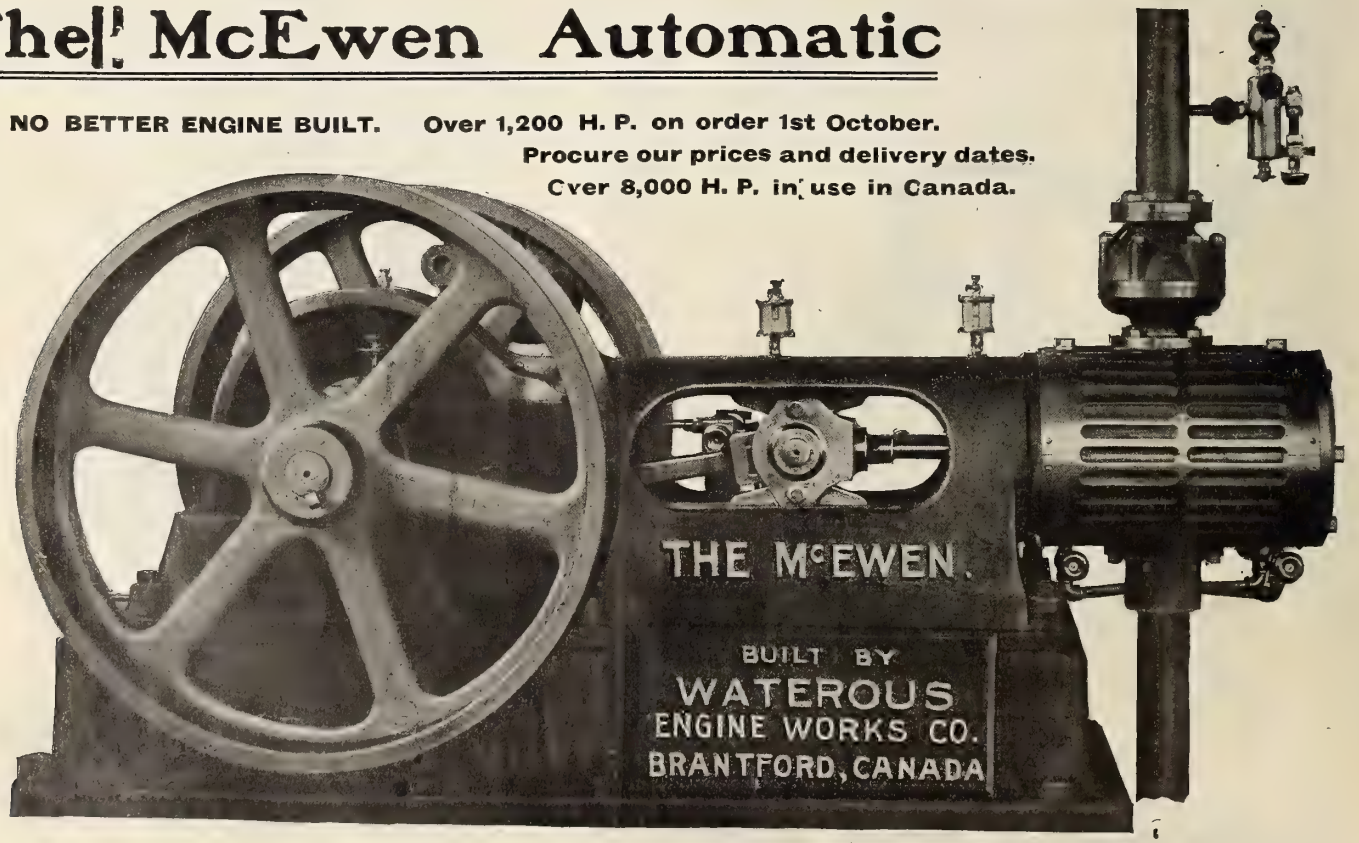
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"Mr. Sarel, of the British Columbia Book Store (Vancouver), recently advertised in the Victoria COLONIST, the Vancouver News-Advertiser and an afternoon Vancouver paper in connection with the purchasing of a ranch. It has been ascertained by the COLONIST correspondent that the replies through the COLONIST were nine in number and more numerous than the other two papers combined."

Extract from a letter received from Vancouver correspondent of the COLONIST.

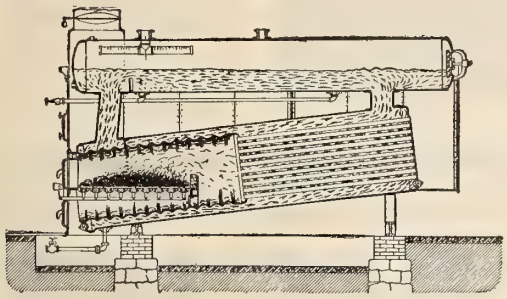
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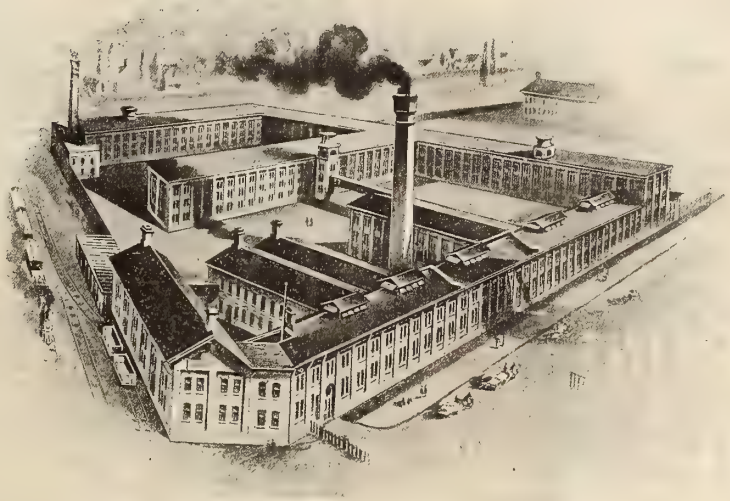
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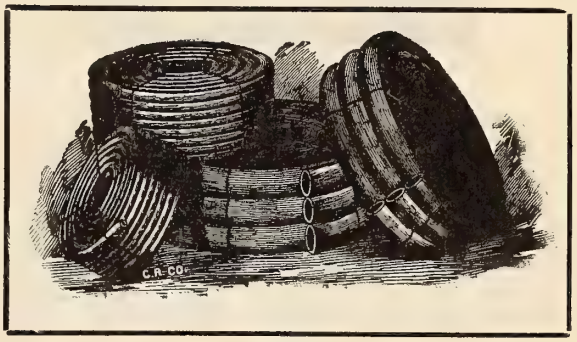
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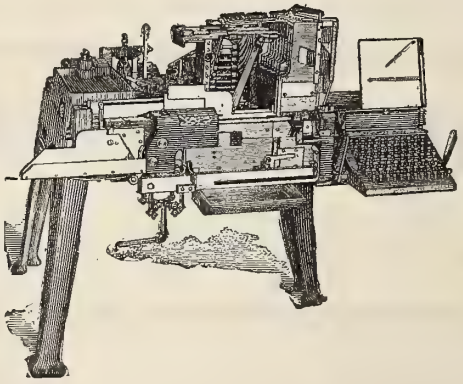


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INDUSTRIAL CANADA

A MONTHLY REVIEW OF MANUFACTURE AND COMMERCE

SEPTEMBER, 1904

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Remember the Thirty-Third Annual Convention

Windsor Hotel Montreal, September 20, 21 and 22 1904.

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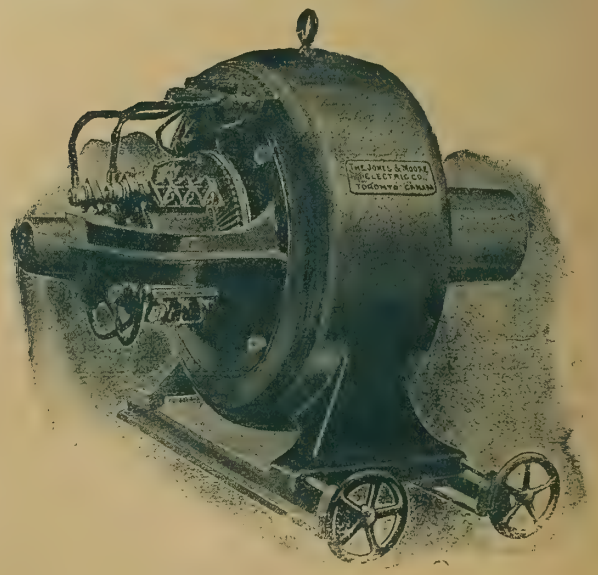
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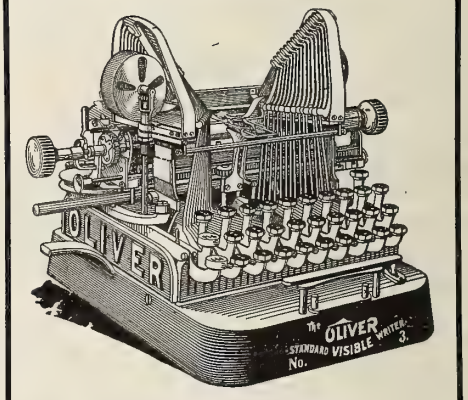
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"There be three things which make a nation great and prosperous: A fertile soil, busy workshops, and easy conveyance for man and goods from place to place."—Bacon.

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INDUSTRIAL CANADA

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3. Chambers of Commerce in the United Kingdom.
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THE TINKERING OF THE DUMPING CLAUSE.

EVERY change made in the Dumping Clause since its first introduction makes it less valuable to Canadian manufacturers in general and more inconvenient for Canadian merchants. In all the history of tariff legislation, it is doubtful if any measure was ever subjected to so much tinkering in so short a period. If the session of Parliament had lasted a month longer the clause would probably have been still further amended. In its original form the Dumping Clause possessed considerable merit, but even before it was introduced to Parliament by the Minister of Finance it was mutilated by the provision that no matter how great the cut in price the extra duty shall in no case exceed one-half the regular duty, except in the case of certain iron and steel articles, on some of which there is no duty at all, and on others very low duties, and in the case of these the dumping duty shall not exceed 15 per cent.

The next change made in the clause was an amendment authorizing the Minister of Customs to make regulations providing for "the temporary exemption from special duty of any article or class of articles when it is established to the satisfaction of the Minister of Customs that such articles are not made in Canada in substantial quantities and offered for sale to all purchasers on equal terms."

One object which Mr. Fielding had in view in making this change was, as he himself explained, to enable the Minister of Customs to withdraw protection from manufacturers in case of strikes stopping the manufacture of an article in the country, but in its ordinary working the clause is simply a discrimination against the small industries of Canada.

In the closing days of the session Mr. Fielding introduced an amendment providing that the Minister of Customs may make regulations exempting from the special duty "any article whereon the duty in schedule A is equal to fifty per cent. ad valorem or upwards, or where the difference between the fair market value of the goods and the selling price thereof to the importer, as aforesaid, amounts only to a small percentage of their fair market value."

The rule that the dumping clause shall not apply in cases where the regular duty is equal to fifty per cent. is equivalent to a declaration on the part of the Government that when the regular duty is adequate, no dumping clause is required. It may be asked why the Government gives some industries protection so high that no special provision for dumping is required, while refusing other industries the same degree of protection. What reason can be given for such discrimination?

What is a small percentage? Since the prorogation of Parliament the Minister of Customs has issued a regulation providing that the exemption shall apply in any case where the difference between the fair market value and the selling price of the goods to Canadians does not exceed five per cent. This will probably be the permanent Government definition of a small percentage, but the Minister of Customs has power to change it at any time if he considers it advisable to do so.

All these changes add to the uncertainty and instability of the tariff, make it more difficult for customs officials to administer it, increase the danger of different taxes being imposed at different customs houses, and place honest merchants at a great disadvantage in competing with dishonest ones.

AN INVITATION TO CUT A LITTLE

THE practical effect of the customs' regulation that when the difference between the fair market value of the goods in the country of production and the selling price thereof to the importer amounts to not more than five per cent. the special dumping duty shall not be imposed will be to encourage foreign manufacturers to cut the price to that extent. Even in cases where such a cut would not ordinarily be made under the old system the importer will ask for it, and it will become the common practice at all times for foreign manufacturers to give Canadian importers a discount of at least five per cent. The effect of this will be much the same as if the ordinary tariff were cut down five per cent. In other words, in adopting a clause which was intended to afford extra protection to Canadian manufacturers, Parliament has practically reduced the protection in many cases by five per cent. Five per cent. may seem a very

NOTICES

Annual General Meeting Canadian Manufacturers' Association, Windsor Hotel, Montreal, Tuesday, Wednesday, and Thursday, September 20th, 21st, and 22nd.

Sept. 20th, ... Sections' Day
Sept. 21st and 22nd, . Regular Business Sessions

small matter, but to struggling Canadian industries which barely managed to exist under the low tariff that has been in force for some years, this concession to the importers may make the difference between life and death.

PENALIZING CHEAPNESS

UNDER a system of specific duties manufacturers can be given adequate protection without penalizing cheapness. Specific protection in no way discourages competition within the country. But with the dumping law in force, if a merchant cuts prices below his competitors, he will be suspected of having dishonestly evaded the law in some one of the many ways in which it is possible to evade it, as shown in a previous issue of "Industrial Canada." The natural tendency will be to prevent that legitimate competition which is the mother of cheapness. Protectionists have always contended that when duties are high enough to afford adequate protection, home competition will reduce the price to consumers, and if the foreign manufacturer wishes to share the trade he must pay the duties or make a reduction in price, which is equivalent to paying the duties, and that thus the consumer is benefited. In adopting the dumping law the Government admits the correctness of this contention, but provides for a fine of one-half the regular duties in case the foreign manufacturer pays more than a small percentage of the duties.

THE DUTY ON RAILS

THE Government deserves hearty commendation for putting into force the duty on steel rails. It has commonly been assumed that the general duty is to be seven dollars per ton of 2,240 lbs. as the commercial ton, on which the price of rails is always based, is 2,240 lbs., but the duty is actually seven dollars per ton of 2,000 lbs., that is $7.84 per ton of 2,240 lbs. The German surtax will make the duty on German rails $10.45⅓ per ton. On the other hand the British rail makers will enjoy a preference of 33⅓ per cent., so that the ordinary duty on British rails will be $5.22⅔ per ton. This is one of the few cases in which the dumping clause may prove a really effective measure, for there will be little difficulty in determining the market price of rails in the country where they are produced. In case of dumping the ordinary duties may be increased one-half. That is the general duty of $7.84 per ton may be increased to $11.76 per ton and the duty on British rails to $7.84 per ton. If the general duty were $11.76 per ton instead of $7.84 there would be no need of a special dumping duty. The British preference of 33⅓ per cent. would then make the minimum duty on rails $7.84 per ton at all times. No one familiar with the history of the development of steel manufactures in the United States can doubt the necessity of adequate protection against British rail manufacturers. It was only by means of high protection that a rail industry was established in the United States. The United States tariff on steel rails from 1867 to the present time has been as follows :

Years	U. S. Duty per ton
1867 to 1870	45 per cent.
Jan. 1, 1871 to Aug. 1, 1872	$28 00
Aug. 1, 1872 to March 3, 1875	25 20
March 3, 1875 to July 1, 1883	28 00
July 1, 1883 to Oct. 6, 1890	17 00
Oct. 6, 1890 to Aug. 28, 1894	13 44
Since Aug. 28, 1894	7 84

Compared with the protection given to the United States steel rail industry in its early stages the protection now granted to the Canadian industry is trifling. Even as late as August, 1894, the United States duty was almost twice as great as the present Canadian duty. Now the United States duty is $7.84 per ton, the same as the general Canadian duty, but the industry is so well established that it does not require such high protection as it did in the early stages.

The United States Congress in order to build up a great rail industry not only imposed high protective duties on imported rails, but stipulated that all railways receiving Government aid should use rails made in the United States.

While a straight specific duty of $11.76 per ton on foreign rails and $7.80 per ton on British rails would be much better for Canada than the measure adopted by the Dominion Government there can be no doubt that the protection given will be of considerable value to both the Dominion Iron and Steel Company and the Company at Sault Ste. Marie. The latter company is already making rails, having a capacity of 500 tons per day, while the mill of the Dominion Iron and Steel Company at Sydney, C.B., will have a capacity of 1,000 tons per day when completed. Even if the mills at Sydney and the Soo are only worked at half capacity they will together produce over 273,000 tons of rails annually. There is therefore no need for Canadian railway companies to buy rails abroad and the protection should be made high enough to prevent them doing so.

MR. BORDEN IN THE NORTHWEST

THE failure to give adequate protection to Canadian industries is due almost entirely to the belief that while the people of the Eastern Provinces would approve of such a policy the farmers of the Northwest would rebel. The favorable reception given to the protectionist speeches delivered by Mr. Robert L. Borden, the Conservative leader, when he went west, did not indicate any great degree of hostility to a policy that would build up Canadian industries. Mr. Borden believed that it was right to advocate in the Northwest the same policy that he advocated in the East even if it should prove unpopular there, but he was agreeably surprised to find that his advocacy of protection for Canadian industries was favorably received throughout the Northwest. In the course of a speech delivered in the House of Commons on the 14th of June, 1904, Mr. Robert L. Borden said :

"And I said that not only the laboring men of Canada, not only those who have capital invested and those who receive a wage out of the investment of capital, but the farmers of the country as well are intensely interested in seeing that we have a stable policy of protection carried out. The people of Canada are beginning to realize, the farmers I think are beginning to realize the value to them of the home market and of important industrial centres, of which we have few in this country to-day. Farmers, newly arrived farmers in the Northwest, pointed out to me a year and a half ago that in making their homes in Canada they felt the disadvantage of not having in Western Canada those great industrial centres and centres of population that afforded them a market in the United States. That condition would come to us in the West of Canada, as well as in the East, if we had in force a policy such as I suggest, and such as we on this side of the House have fought for. Winnipeg and other great points in the West would become manufacturing centres, great industrial centres, before many years had passed, if we had in Canada a tariff adequately and firmly protective of our home market."

THE BALANCE OF TRADE

FOR the fiscal year ending June 30, 1904, the imports of merchandise for consumption in Canada amounted in value to $243,586,424, while the exports of Canadian merchandise were valued at $198,414,439, including $18,715,739 worth of gold-bearing quartz, dust, nuggets, etc., and $1,865,528 worth of metallic silver contained in ore, concentrates, etc. If this gold and silver be included, the balance against Canada in the year's trade was $45,171,985, but if we exclude unmanufactured gold and silver as well as coin and bullion from both exports and imports, the balance against Canada is $65,753,252. When the miners of the Yukon carry off their gold to the United States, the Government includes

this gold in exports of merchandise. Their right to do this cannot be disputed, but at the same time it is evident that taking this gold out of the country does not benefit Canada, and as the discovery of the Klondike gold fields was not due to Government policy it is fair to exclude these gold exports in making comparisons with trade figures under previous administrations. In 1896, the year before the Fielding tariff was adopted, the exports of Canadian merchandise were valued at $106,378,752, while the imports of merchandise for consumption in Canada were valued at $105,361,161, showing a small balance in Canada's favor. For the six years ending with 1896 the total balance of trade against Canada amounted only to $67,030,717, so that the adverse balance for the one year ending June, 1904, is almost equal to the adverse balance for the six years immediately preceding the adoption of the Fielding tariff.

But let us compare the fiscal year ending June 30, 1904, with previous years of the Laurier administration. As the Klondike gold was discovered shortly after the adoption of the Fielding tariff, for purposes of comparison we may include this gold in the exports for the seven years from 1898 to 1904 inclusive. The figures are as follows :—

	Imports of Merchandise for Consumption.	Exports of Canadian Merchandise.
1898.	$126,307,162	$139,920,932
1899.	149,346,459	132,801,262
1900.	172,506,878	163,510,790
1901.	177,700 694	177,431,386
1902.	196,480,190	196,019,763
1903.	224,810,528	214,410,674
1904.	243,586,424	198,414,439

For the six years preceding 1904 the adverse balance only amounted to $23,066,104. For the five years preceding 1903 it only amounted to $12,657,243, but for the one year ending June 30, 1904, it amounted to $45,171,985.

During the early years of the Fielding tariff the whole world was enjoying extraordinary prosperity. The manufacturers of the United States, the United Kingdom and Germany were busy filling home orders and consequently did not offer very severe competition to Canadian manufacturers. They sold large quantities of goods to Canadians, but did comparatively little dumping or slaughtering. Prices were rising all over the world, and the *ad valorem* tariff went up as prices went up. The crops in Canada were unusually good, and the prices obtained for them in the markets of the world higher than for many years before. The free farm lands of the United States had been taken up, and being no longer able to get cheap lands in their own country, the farmers of the North-Western States began to overflow into Canadian territory. Thus in spite of the defective Fielding tariff the country remained prosperous, but protectionists pointed out that the tariff which caused very little dissatisfaction during a period of unusual world-wide prosperity, would be found altogether inadequate to protect Canadian interests under ordinary conditions. and the predictions of the protectionists are now being verified. The manufacturers are feeling outside competition more and more severely. A thorough revision of the tariff is absolutely necessary, and the longer it is delayed the more difficult it will be to restore prosperity to the industries now being injured by foreign competition.

MANUFACTURERS AND IMPERIAL PREFERENTIAL TRADE

HON. JAMES YOUNG, in an interview with the *Toronto News*, challenges the manufacturers of Canada to come out squarely and state their views on the question of Imperial Preferential Trade. Canadian manufacturers have not been at all backward about expressing their views. No other section of the Canadian people have so clearly defined their attitude in this regard as the manufacturers. A few of them are entirely opposed to the principle of a preference, because they have suffered so severely from the preference clause of the Fielding tariff, that they fear any form of preference, but the great majority of Canadian manufacturers approve of the principle of an Imperial preference, provided that the minimum tariff shall be high enough to afford adequate protection to Canadian industries. They favor the raising of the general tariff so that when the preference is granted industries which are now suffering severely from British competition will have fair protection. If the plan proposed by the Canadian Manufacturers' Association and approved almost unanimously by its members is adopted, the Canadian tariff against British goods will average considerably higher than the present tariff against British goods, but it will be very much lower than the tariff which the United States imposes on British goods. It will be even lower than the tariff imposed on British goods by the United States Congress when the Democratic party was in power. As the reductions made in the United States tariff by the Democrats were hailed with joy by the British people, they ought to be pleased if Canada gives them an even more favorable tariff than that of the Democrats, while greatly increasing the duties on foreign goods. The effect must be to largely divert our external trade into British channels, and while our purchases from Britain will be less per head of population than at present, our total imports from the United Kingdom will greatly increase, owing to the rapid increase of population under a system of adequate protection. Under our present system we buy what we don't produce in Canada chiefly from foreign countries, and the United States is getting a larger share of our trade every year without giving us a fair return. Under the system proposed by the Canadian Manufacturers' Association, what we cannot produce in Canada will be imported chiefly from countries of the Empire. Suppose Canada's tariff at present averaged about as high as the United States tariff with no preference in favor of British goods, would not British manufacturers be glad to get a reduction of 33⅓ per cent.? If the United States Congress would give British manufacturers a preference of 33⅓ per cent., lowering their tariff against British goods to that extent while maintaining it against other countries, would not the British people be pleased? Undoubtedly they would. Then such a preference as the Canadian manufacturers are willing to concede is better than no preference at all, taking for granted the fact that a general increase in the Canadian tariff is inevitable, as it is demanded by the great majority of the Canadian people.

It may be said that while such a preference as our manufacturers are willing to concede is better than no preference at all, it is not sufficient to justify any sacrifice on the part of British consumers for the purpose of reciprocating. But it should be distinctly understood that we do not wish the British people to make any sacrifice for the sake of Canada. We simply ask that the duties now imposed on tea, coffee, chicory, cocoa and chocolate produced within the Empire be removed, and that the revenue now obtained from the taxes on these articles, which are used by every British family, be raised by imposing small duties upon foodstuffs imported from foreign countries. It has been shown that the revenue derived from the taxes on tea, coffee, chocolate, chicory and cocoa produced within the Empire amounted to $26,000,000 annually even before the recent increase in the tea duty, and if these taxes were transferred to foreign food products the colonies would receive a very substantial preference.

All that is asked for is a readjustment of taxation which would not in any way increase the cost of living to British consumers. If the British people cannot see that such a readjustment would cost them nothing, we don't wish them to make it for the sake of Canada, but if we can persuade them that they can help the colonies in this way without hurting themselves, the Empire will be greatly strengthened by such a reciprocal arrangement.

Mr. Chamberlain is well acquainted with the views of the Canadian Manufacturers' Association in this regard, and he told President George E. Drummond that he did not wish Canadian manufacturers to make any sacrifice.

THE TORONTO GLOBE'S ATTACK ON MR. FIELDING

THE idea that a sane man would sell his goods at a loss in a foreign market in the hope of closing up some industries there, and in the still more nebulous hope of afterwards holding that market and getting higher prices is too absurd for serious consideration. No one with any knowledge of business ever entertained it.—*Toronto Globe.*

This is the opinion of the leading Liberal newspaper of Canada. It is equivalent to saying that the Liberal Minister of Finance has no knowledge of business, for in the course of the Budget Speech on June 7, 1904, Hon. William Fielding said:

"We find to-day that the high tariff countries have adopted that method of trade which has now come to be known as slaughtering, or perhaps the word more frequently used is dumping; that is to say, that the trust or combine, having obtained command and control of its own market and finding that it will have a surplus of goods, sets out to obtain command of a neighboring market, and for the purpose of obtaining control of a neighboring market will put aside all reasonable considerations with regard to the cost or fair price of the goods; the only principle recognized is that the goods must be sold and the market obtained. I quite realize that what I may call the extreme free trader, that is the theoretical free trader, if there be such a man, who attaches more importance to a theory than to the practical things of this life, may ask 'Why should we care about that; do we not get the benefit of cheap goods?' Well, if we could be guaranteed forever or for a long period that we would obtain cheap goods under that system, the question would be a very fair one. If these trusts and combines in the high tariff countries would come under obligations, with sufficient bonds, to supply us with these goods at the lowest prices for the next fifty years, it would probably be the part of wisdom for us to close up some of our industries and turn the energies of our people to other branches. But surely none of us imagine that when these high tariff trusts and combines send goods into Canada at sacrifice prices they do it for any benevolent purpose. They are not worrying about the good of the people of Canada. They send the goods here with the hope and the expectation that they will crush out the native Canadian industries. And with the Canadian industry crushed out what would happen? The end of cheapness would come, and the beginning of dearness would be at hand. Artificial cheapness obtained to-day under such conditions, at the expense of dearness at a very near day in the future, is not a system of which we could approve or which any of us on either side of the House could encourage."

That which the *Toronto Globe* asserts to be too absurd for serious consideration the Liberal Minister of Finance declares to be an actual fact. It is true that Mr. Fielding assumes that this selling of goods to foreigners below cost is a new thing and is only practised by manufacturers in high tariff countries, but as already pointed out by "Industrial Canada," a British Royal Commission reporting on industrial matters some years ago, made the following statement:

"The laboring classes generally in the manufacturing districts of this country, and especially in the iron and coal districts, are very little aware of the extent to which they are often indebted for their being employed at all to the *immense losses which their employers voluntarily incur in bad times in order to destroy foreign competition and to gain and keep possession of foreign markets.* The large capitals of this country are the *great instruments of warfare against the competing capital of foreign countries.*"

MUTUAL FIRE INSURANCE

Mr. James Inglis of the American Blower Company, Detroit, and Chairman of the Fire Insurance Committee of the National Association of Manufacturers, has an article in *American Industries* on Mutual Fire Insurance for Factories. Mr. Inglis has made a careful study of this question and has concluded that the manufacturers of the United States, who have risks that may be described as the middle class, are paying too much for their insurance. The rates paid on risks taken by the Factory Mutuals he does not think can be improved on. Part of Mr. Inglis' article will apply with equal force to the situation affecting conditions with which the Insurance Committee of the Canadian Manufacturers' Association are dealing. His article in part is as follows:

"In discussing this subject it should be stated at the outset that a large number of our members are already provided with the most perfect form of insurance which can probably be devised, viz., that afforded by the Factory Mutuals, which insist upon the risks being sprinkled and provided with every known safeguard against fire, which results in reducing the cost for protection to a mere fraction of what is charged by the stock companies on unprotected risks. To the manufacturers in this class this committee can have nothing to say except to commend their wisdom in providing themselves with such insurance.

"Nor can the committee be of any service to those at the other extreme. There must be a number of members of the Association whose risks are extra hazardous, badly located and not properly maintained; which make them a part of that undesirable clientele of the insurance companies which is one of the causes for the high rates paid by the large middle class. By far the greater portion of the manufacturers in the country are doubtless in this middle class; that is, they are not fully protected, as would be required by the Factory Mutuals, but at the same time their plants are more or less isolated, free from the dangers of conflagrations, are kept clean and are provided with ordinary safeguards. It is our aim to secure for this large class protection against fire at a proper cost. Very much less than one-half of what we pay in insurance premiums is actually absorbed in covering fire losses. It has been demonstrated that from 10 per cent. to 15 per cent. of the premiums paid is ample to cover the legitimate expenses of conducting a mutual company.

"It would be ill-advised for the National Association of Manufacturers, as such, or any similarly constituted organization to oppose a legitimate business making a legitimate profit, but if the old line insurance companies are operating under excessive fixed expenses and, through their method of insuring risks of every kind, good, bad, and indifferent, are not charging against each their proper proportion of the loss annually sustained, then it is time that some steps should be taken to relieve the manufacturers of the burden which they are carrying.

Mr. Edward Atkinson, President of the Boston Manufacturers Mutual Insurance Co., and a recognized authority on mutual insurance made the following remarks before the Furniture Association of America with reference to the dangers of mutual companies. These remarks are published in *American Industries* of August 1, 1904:

"The danger point in starting a mutual company is at the beginning when the annual premium may be exhausted by a single total loss. When the company has reached an annual premium equal to two total losses it has got a much safer position, and when under conservative and careful management it has secured an annual premium equal to three total losses of three separate risks, it is safely established and may then go on writing larger and larger lines and increasing its annual income to four total losses of single risks. Under conditions of annual income equal to three or four total losses of single risks one company may as safely write one hundred thousand dollars on one risk as it has heretofore written ten thousand dollars."

The National Fire Protection Association in its last Annual Report gives some interesting information regarding the value of sprinklers in protecting property from fire. The statistics show that in 561 cases no less than 512 have been handled successfully by the sprinklers. The fire in these cases was either extinguished by the sprinklers or properly held in check so as to allow the extinction by outside aid. The percentage of sprinkler alarm failures is remarkably small being only 6%.

Executive Council

AUGUST MEETING

Last Meeting of the Association Year
Preparing for the Convention

THE regular meeting of the Executive Council was held in the Council Chamber, Board of Trade Building, on Thursday, August 18th, 1904, at 2 p. m.

The President, Mr. Geo. E. Drummond, occupied the chair, and the following other members of the Council were also present: Messrs. Fred Birks, E. C. Boeckh, Geo. Booth, C. N. Candee, H. Cockshutt, Robt. Crean, Richard A. Donald, P. W. Ellis, Geo. D. Forbes, W. K. George, W. P. Gundy, J. Hewton, R. Hobson, W. K. McNaught, Jas. Maxwell, J. S. King, Thos. Roden, A. S. Rogers, W. B. Rogers, J. M. Taylor, A. W. Thomas, J. O. Thorn, W. B. Tindall, C. R. H. Warnock, Henry Wright.

Minutes of the previous meeting as published in the last issue of INDUSTRIAL CANADA were approved.

Regrets were received from the following members unable to be present :—Messrs. Geo. E. Amyot, Quebec ; T. H. Smallman, London ; and R. McLaughlin, Oshawa.

An invitation to the President and members of the Association to attend the Annual Meeting of the Maritime Board of Trade held in Moncton on the 17th inst., was received and gratefully acknowledged.

Reports of Officers and Committees were received as follows, and upon motion were regularly adopted.

TREASURER

The Treasurer's report was presented by Mr. Geo. Booth. It contained a statement of the finances of the Association up to July 31st, 1904, which closed the fiscal year of the Association.

SECRETARY

The Secretary reported the Annual Meetings of the Manitoba and British Columbia branches, and announced the Annual Meeting of the Montreal Branch to be held on the 29th inst. He also outlined the arrangements for the Annual General Meeting of the Association to be held at Montreal in September, and emphasized the importance of a large attendance, particularly from the Executive Council.

FINANCE COMMITTEE

The report of the Finance Committee was presented by Mr. W. K. George. It recommended the payment of the regular monthly expenditure.

It also recommended the appointment of Mr. J. E. Wood, of Halifax, as Secretary of the Nova Scotia Branch of the Association in place of Mr. R. M. Hattie, who had recently resigned.

RECEPTION AND MEMBERSHIP

The report of the Reception and Membership Committee was presented by the Chairman, Mr. Robt. Crean. It contained a number of important particulars with regard to the Convention arrangements. The following are invited to be guests of the Association during the Convention :—The Right Hon. Lord Strathcona, Sir John Colomb, Hon. W. H. Fisher, Hon. R. H. McCarthy, Hon. Sir Robt. Bond, Hon. A. B. Morine, Hon. Sir Alfred Lyttleton, M.P., Col. Sir Howard Vincent, M.P., Sir W. Lloyd Wise, and D. M. Parry, Esq., President, and Marshall Cushing, Esq., Secretary, National Association of Manufacturers of U.S.A.

Eighteen applications for membership as published in another column were recommended for acceptance.

The report also contained the announcement that the Committee had decided to recommend as a part of its Annual Report that the members of the Association should be consulted regarding an excursion to Great Britain in 1905.

PARLIAMENTARY

The report of the Parliamentary Committee was presented by Mr. P. W. Ellis. It dealt particularly with the discussion of the Alien Labor Bill recently introduced into the Canadian House of Commons. The members of the Executive Council and of the Association in all parts of Canada had reason to feel grateful for the promptness with which the bill had been met by the Committee. This appreciation was shown in the enthusiastic manner in which the report was received.

RAILWAY AND TRANSPORTATION

The report of the Railway and Transportation Committee was presented by the Chairman, Mr. J. O. Thorn.

It outlined the work of the Department since the last meeting of the Executive Council, and reported the judgments rendered by the Board of Railway Commissioners on a number of specific cases. These included the judgments in favor of the Sutherland Innes Co., Limited, Wallaceburg Cooperage Co., The Sydenham Glass Co., H. E. Gidley & Co., and M. Brennan & Sons Mfg. Co. All of these decisions were given in favor of the complainants, and the arguments in each case had been presented by the Manager of the Association's Transportation Department.

During the month the Manager of Transportation had visited Winnipeg and dealt with a number of specific complaints made by the members there. He was now on his way to British Columbia in order to place a number of cases before the Commission when it sits in Vancouver in the near future.

COMMERCIAL INTELLIGENCE

The report of the Commercial Intelligence Committee was presented by Mr. A. W. Thomas.

It outlined the system about to be inaugurated for the appointment of correspondent members who would act as trade representatives for the Association in foreign markets. Representatives in the following centres were being communicated with :—Smyrna, Yokohama, Cairo, Capetown, Buenos Ayres, Melbourne, Sydney, Paris, Copenhagen, Christiania, Amsterdam, Brussels, Vienna, Rome and Madrid.

It also reported the receipt of certain propositions respecting the establishment of an exhibit of Canadian goods in London. The Committee had decided that these could not be dealt with until the question of a London office for the Association had been finally disposed of.

Mr. G. Eustace Burke, the Canadian Government Agent at Kingston, Jamaica, had presented a scheme for the arrangement of a permanent exhibition of Canadian goods in that Island, to be known as the Anglo-Canadian Museum. It was decided that the assistance of the Association should be given in this matter by the insertion of an article in INDUSTRIAL CANADA.

The correspondent member of the Association in Trinidad, Mr. T. Geddes Grant, had written urging again the necessity of a parcel post between Canada and that Island, and the Committee reported that they were renewing their correspondence upon this subject with the Department of the Postmaster General.

The Committee also stated that they were endeavoring through correspondence with Mr. J. S. Larke to suggest some means for removing the tax on catalogues and price lists entering Australia.

INSURANCE

The report of the special Committee on Insurance was presented by Mr. J. F. M. Stewart, the assistant secretary. It reviewed the work accomplished by the Committee up to the present

time and presented in brief outline a plan of insurance with the recommendation that it should be submitted to the Annual Meeting. This plan was briefly discussed and met with the approval of the Executive Council. The suggestion was made that additional expert evidence should be taken before the plans were finally submitted to the Association at large.

LONDON OFFICE

The report of the special Committee appointed to make investigations regarding the establishment of an office of the Association in London was presented by Mr. A. W. Thomas. This report showed that to the enquiry circular issued to the members of the Association, 394 replies had been received. Of this number about one-fourth desired the establishment of the office.

The results of the enquiry while proving to the Committee that only a comparatively small number of the members were able to make use of the office showed that the project was a most desirable one for the advancement of Canadian export trade. It would be particularly advantageous to Canadian manufacturers to be represented in London, the buying centre of the Empire, and the work to be done would be largely of a national character.

The report concluded with a recommendation that the Dominion Government should be consulted in the matter and requested to grant their assistance in the undertaking. Mr. R. A. Donald and the Secretary were appointed to place the matter before them.

SPECIAL EXHIBITION COMMITTEE

The report of the special Dominion Exhibition Committee was presented by Mr. W. K. George. It consisted of a financial statement showing the actual expenses in connection with the work of the Association to be $1,561.97.

MONTREAL BRANCH

The report of the Montreal Branch was presented by Mr. Fred Birks. It appears in full in another column.

TORONTO BRANCH

The report of the Toronto Branch was presented by the Vice-Chairman, Mr W. B. Tindall. It also appears in another column.

BRITISH COLUMBIA BRANCH

The Secretary reported the Annual Meeting of the British Columbia Branch which had been held on August 1st. This report is also published in full in this issue. The resolution dealing with the Dominion Exhibition for 1905 was referred to the Commercial Intelligence Committee of the Association for action.

Before the meeting closed, Mr. P. W. Ellis expressed the pleasure of the members of the Executive at the return of the President from Great Britain and his presence at this meeting, congratulating him also upon the able manner in which he had represented the Association and the Dominion during his recent visit.

Mr. Drummond replied with a few words of appreciation, after which the meeting adjourned.

NEW MEMBERS

Passed by Executive Council, August 18, 1904

Durham, Ont.

DURHAM MANUFACTURING CO., LIMITED—Cream Separators.

Fort William, Ont.

W. J. COPP, SON & CO.—Stoves and Furnaces.

Kingston, Ont.

THE FRONTENAC CEREAL CO., LIMITED—Cereal Foods.

Montreal, Que.

DARLING & BRADY—Soaps and Concentrated Lyes.
J. HIRSCH, SONS & CO.—Cigars.
THE HUGHES, OWENS CO., LIMITED—Blue Print Paper and Draughting Office Supplies.
MACFARLANE SHOE CO.—Children's Footwear.

Napanee, Ont.

THE GIBBARD FURNITURE CO., OF NAPANEE, LIMITED—Bedroom Suites, Buffets, China Cabinets, Sideboards, Chiffoniers.

Paris, Ont.

THE PENMAN MANUFACTURING CO., LIMITED (R. Thomson, 2nd Member).

Quebec, Que.

W. & J. SHARPLES—Lumber.

St. Stephen, N.B.

THE BEAN & STEWART SKIRT CO.—Ladies' Underskirts.

Strathroy, Ont.

PINCOMBE & DONALDSON—Flour, Staves and Heading.

Toronto, Ont.

ARMOUR, LIMITED—Beef Extract and Beef Extract Products.
ATWELL FLEMING PRINTING CO.—Printing.
CANADIAN MILK PRODUCTS—"Lactomen" (Dry Milk), Butter, etc.
GOURLAY, WINTER & LEEMING—Pianos.
M. N. LEVITT—Furs, Fur-lined Garments and Uniforms.

Winnipeg, Man.

MANITOBA IRON WORKS CO.—Foundry and Machine Shop.

MONTREAL BRANCH

High Price of City Gas.—Objections to Alien Labor Bill.—Increase in Insurance Rates.—Convention Arrangements.

THE complimentary dinner given by the Montreal Branch to the President of the Association on July 21st was a highly successful function, and one that should do much to advance the interests of the Association, not only in Montreal but throughout the country. In addition to the guest of the evening, there were present Hon. Messrs. Prefontaine and Brodeur, and Messrs. Borden and Monk. The Montreal Branch was also pleased to have present the Vice-President for Ontario, Mr. Cockshutt, Mr. Richard A. Donald, Mr. Younge, the General Secretary, and several local friends of the Association. A full report is to be found in the August number of "Industrial Canada."

The regular monthly meeting of the Executive Committee was held a week earlier than usual, when it was decided to hold the Annual Meeting of the Branch on August 29th, in the Reading Room of the Board of Trade. It was decided also to write to the City Council and ask what the City intended to do with the option it holds to take over the gas plant of the Montreal Light, Heat and Power Co. Under the contract the city has the power to take over the plant at an arbitration value a year from November, provided notice be given by November 1st of this year. Inasmuch as the price of gas in Montreal is $1 and $1.20 per 1,000 feet, the Montreal Branch of the Association will exert its influence in whatever way is deemed advisable to have the price reduced. There are also some complaints in regard to the charge for power made by the same concern.

RESOLUTION RE ALIEN LABOR

Six members of the Montreal Branch united with the General Secretary and waited upon the Minister of Labor in regard to the Alien Labor Bill. The Executive also passed the following resolution and forwarded it to the Premier and the Minister of Labor:

> *Whereas*, the members of the Canadian Manufacturers' Association stand in need of a great number of skilled and experienced workpeople that are not procurable in this country,
>
> *And whereas* it is in the interest of both employees and employers that nothing should be enacted that will prevent the filling of these constantly recurring permanent positions, or deter the natural advancement of Canadian industry,

And whereas adequate facilities for the technical education of skilled operators is not provided in this country, necessitating the importation of skilled workmen to maintain the efficiency of factory processes,

And whereas the existing Alien Labor Law reserves all positions offering in Canada to British citizens when the suitable experience is available,

Therefore be it resolved that this Committee of the Canadian Manufacturers' Association regard the proposed Alien Labor Bill as directly, seriously and unnecessarily inimical to Canadian interests.

Three new members were passed.

Since the meeting of the Executive Committee the insurance rates in the congested district of the City of Montreal have been increased by 50 cents. This has caused some decidedly caustic comment on the part of some of our members who are affected, and they are awaiting with some eagerness the insurance proposition that will be laid before them at the Annual Meeting in September. There will also be some expression of opinion at the meeting of the Branch on August 29th.

Preparations are being made by the Montreal members for the Annual Meeting, and a large representation of members is confidently expected. A local Arrangement Committee, with Mr. J. J. McGill as Convener, and with Messrs. Wm. McMaster, C. C. Ballantyne, Col. Gardner and R. R. Stevenson in charge of the sub-Committees on Finance, Reception, Entertainment and Banquet, respectively, has all the details well under way. So far as local arrangements are concerned, the Executive Council may feel assured they will be well cared for. An invitation from the members of the Montreal Branch, together with a circular giving full information in regard to Montreal hotels, has been mailed to all the members.

TORONTO BRANCH ANNUAL MEETING

Able Review of Year's Business by Chairman Murray—Labor, Taxation, Municipal Legislation, Harbor Improvement, Insurance and Fire Protection among the matters considered—Officers for 1904-05.

THE annual meeting of the Toronto Branch of the Canadian Manufacturers' Association was held in the Board of Trade building, Toronto, on August 11th, 1904, at 2 p.m.

Among those present were: Messrs. James P. Murray, Chairman of the Branch, W. G. Anderson, G. Frank Beer, Geo. Booth, G. P. Breckon, Geo. Brigden, C. A. Calkins, C. N. Candee, Richard A. Donald, S. H. Chapman, L. V. Dusseau, P. W. Ellis, B. Fletcher, W. K. George, Robt. Greig, W. P. Gundy, S. R. Hart, W. T. Kernahan, J. S. King, C. B. Lowndes, J. Mont Lowndes, W. J. McMurtry, J. S. McKinnon, W. K. McNaught, C. S. Meek, H. G. Nicholls, Wm. E. Orr, Thos. Roden, A. S. Rogers, W. B. Rogers, T. L. H. Sims, A. W. Thomas, J. O. Thorn, John Turnbull, Geo. W. Watts, M. Wilbee, E. Whaley and others.

The routine business being disposed of the following reports were presented.

INDUSTRIAL EXHIBITION

Mr. W. K. McNaught, Chairman of the Exhibition Committee of the Branch, reported the work of that committee in connection with the Toronto Exhibition of 1903 and the Winnipeg Exhibition of this year. He commented on the great advance that had been made in the Toronto Exhibition, including all exhibits of manufactured goods since the same had come under the more direct care of the representatives of our Association. He spoke very highly regarding the success and importance of the Winnipeg Exhibition just closed.

ONTARIO ELECTRIC COMMISSION

Mr. P. W. Ellis, who has represented the Toronto Branch on the Ontario Electric Power Commission for the past two years, gave the details of the work of that Commission since its inception. He pointed out the many difficulties that had been overcome, and stated that the Commission was now equipped to proceed without further delay. He dealt at some length on the importance of the investigation being made. This report was very heartily received.

SECRETARY'S REPORT

Mr. J. F. M. Stewart, Secretary of the Branch, reported on the work of the Executive Committee, and gave a statement showing the membership of the Branch. The Committee held in all fifteen meetings, at which there was an average attendance of nine members. In addition to the Executive meetings, eight special committees and twelve deputations were appointed on as many different matters.

The membership of the Branch has increased as follows: It was organized in July, 1900, with 225 members; at the 1901 annual meeting it had increased to 275; in 1902 it was reported at 272; in 1903 at 331, and this year at 395, showing a net gain for the year of 64 members.

CHAIRMAN'S REPORT

Mr. Jas. P. Murray's report dealt with several subjects of general interest to the city and reviewed the many matters that had been considered by the Branch during the year. His report in part was as follows:—

THE TORONTO FIRE

The greatest conflagration in our history robbed us on April 19th last of a very important section of the commercial part of our city. The destruction was a serious set-back to many business houses and we wish for each and all of them a prosperous future; we particularly wish this for the thirty-eight unfortunate ones that are united with us in the work of the Toronto Branch.

The fire brought to the surface in a wonderful way the sterling qualities and solidarity of Toronto's mercantile men. There was no hesitating. Practically every sufferer shouldered his load and in many cases before the fire was extinguished had plans laid for new premises and plant and facilities for greater business.

It will be some time before everyone will be suitably located, but clients and customers are being satisfactorily served.

It was particularly gratifying that the insurance companies without a single exception were able to pay their losses aggregating upwards of $9,000,000.

CIVIC CONDITIONS

Speaking generally, the commercial interests of our city are in a gratifying position. The building permits issued by the city are much larger than in previous years. The wholesale and distributing trades are flourishing and the manufacturers are as a rule doing a satisfactory business.

Our city, however, is not without its drawbacks. It is true that some of our manufacturers have increased their output within the last few years, but we cannot point to any large new industry that has recently located with us. There must be some reason for this, as we know that new factories are springing up around the city in locations that have not the facilities for business that we have. We also note that Toronto is losing some of its important factories.

Some of the reasons why Toronto is not considered a desirable place in which to locate might be enumerated. Taxes are not low. This in itself is not an objection provided they are being spent in such a way as to insure permanent improvements for our city by following out a definite plan of development.

The want of a properly organized plan leaves the gravest difficulties without proper consideration by those to whom the care of the city's advancement has been given. May I mention the indifference to the safety of life such as the condition at the foot of Yonge Street, and the many level crossings at other points.

Then too, in legislation, the interests at stake are not considered. The Smoke By-law is an example. We favor a Smoke By-Law that will regulate the smoke difficulty and the Toronto Branch has often expressed itself to that effect. The City Council passed a By-law that absolutely prohibits anyone who builds a fire from causing smoke. It is regrettable that when it is necessary to pass a city ordinance governing issues of this kind, that measures are adopted which are impossible to carry out. Factories in the city are too often subjected to annoying propositions which act as a detriment to others who look for locations in our midst.

Organized labor is another source of trouble. In Toronto wages are higher than in other nearby centres. The city lends its



RICHARD A. DONALD
Chairman, Toronto Branch, 1904-05.

assistance to abnormal wages by paying the very highest prices for its labor. This affects what manufacturers must pay for labor and the wages of their employees are accordingly influenced. The cost of labor is not more serious, however, than interference by employees in management. This interference cannot be tolerated by any well-conducted business. Trade unions are organized in Toronto in almost every trade and are probably doing more than any other single power to keep away employers of labor from the city. The manufacturer must sell his product in the open market in competition with the goods manufactured all over the world and labor unions must recognize this condition. The city, on its part, should not legislate as unionism dictates. I think it would be well for our Branch to put itself strongly on record on the right of employers to have that absolute liberty which belongs to every British subject. This freedom under the law is now interfered with by the unions. A man may not accept work in certain shops unless he becomes a member of some organization which may have several members in the shop. If he refuses to join the organization his life is made unbearable; the employer is asked to dismiss him and if he declines to do so the organization creates trouble.

Not only is the free employee threatened with trouble if he does not surrender his freedom but it is too often an occurrence of the present day that the employer is threatened with serious loss if he does not accede to also surrender his liberty and control of his business.

Our Association should put itself strongly on record and demand such legislation as will assure to law abiding citizens freedom to take or refuse employment under their own judgment.

TAXES ON MACHINERY

Taxes have not been paid on machinery since 1892. Under a by-law passed that year exemption was granted for a period of ten years. When this privilege expired the Municipal Council had no power to extend the same. Through the efforts of the Toronto Branch the Legislature authorized the Municipalities of Ontario to extend this exemption to December, 1903, and later, authority was given to extend the same to December 31st, 1904.

These extensions were secured pending the passing of the Assessment Act. The general principles of this Bill have received our continuous support, but as the Act was a question of Provincial importance it came under the direct supervision of the Parliamentary Committee of the Association.

The Act provides in brief, as far as concerns manufacturers, that personalty tax be abolished. For this there is substituted a business tax which is computed by reference to the value of the land occupied. The business tax of a distillery is levied on an assessment equal to 150 per cent. of the assessed value of the land; the business tax of a brewery (malting houses excepted) is levied on an assessment equal to 75 per cent. of the assessed value of the land; wholesale merchants, insurance companies, etc. are at the same percentage as breweries. Manufacturers are assessed on a 60 per cent. basis and do not come under the 75 per cent. basis of the wholesalers if they wholesale the goods of their own manufacture.

The Act provides that all fixed machinery used for manufacturing purposes is exempt, but this does not apply to fixed machinery for the supply of motive power.

These requirements, which cover the most important changes made, are in the right direction and their operation will be watched with interest.

In view of the fact that exemption from taxes on machinery was provided for in the new Act, no effort was made to have the privilege extended. The Act, however, provided that it should not be effective until January 1st, 1905. The result is that after twelve years' exemption from taxes on machinery and permanent exemption, commencing January 1st, 1905, that for this year all machinery is being assessed.

It is generally conceded that this was not intended and it will be necessary to petition the Legislature at its next session to grant authority to continue the exemption in Ontario municipalities for another year.

ELECTRIC POWER

At the last Annual Meeting a short account was given of the efforts of the Branch acting with Western Ontario Municipalities in the matter of electric power from Niagara. Mr. P. W. Ellis has been our representative on the Municipal Power Commission since that time, and in addition to being a member of the Commission has been honored by being appointed Vice-Chairman and Treasurer of the same. The Toronto members owe much to Mr. Ellis for his able work on the Commission.

The Commission has estimated the cost of their investigation at $15,000. To defray this expense the Municipalities of London, Brantford, Stratford, Guelph, Woodstock, Ingersoll and Toronto,

have each agreed to pay their proper share. In proportion to assessment, Toronto's share is $12,000.

There can be no two opinions regarding the importance of the investigation undertaken by the Commission, and their report and recommendations will be eagerly looked for. The Commission will soon have funds at its disposal that will allow it to act without delay.

SMOKE BY-LAW

The by-law to compel manufacturers and others creating smoke to use smoke preventers was passed October 5th, 1903, and came into force July 1st this year. A city official has been appointed under the Assessment Department to enforce the same.

This by-law was opposed for three years, and each time that representations were made to the Council and the unreasonable features of the by-law pointed out it was dropped. Notwithstanding these admissions that the by-law was faulty, it was passed as originally drafted, and it is impossible for manufacturers to live up to the letter of the law.

The Toronto Branch has always been in favor of anything which will improve the city, and are now ready to support a reasonable Smoke By-Law, believing it to be in the best interests of all, and we feel sure that the manufacturers will do all they can to abate the smoke trouble. It is hoped that the smoke inspector will exercise his judgment in cases where efforts are being made to comply with the intention of the by-law.

PAWN BROKERS

It was a surprise to your Executive to learn that a number of our members have had very unsatisfactory experiences with some of their employees who were aided in wrong-doing by irresponsible pawn-brokers.

The Branch made several careful investigations into the laws of several cities regarding the licensing and regulating of pawnshops, and concluded that the law should be amended in a number of respects.

The Branch made several recommendations to the Provincial Legislature which we hope will be acted on at the next Session. The principal changes desired are :

1. An increase in the license fee from $60 to $250, and a satisfactory bond for $1,000, with power to refuse or revoke any license.
2. The delivery daily to the Chief of Police of a complete record of all goods taken in pawn during the preceding twenty-four hours.
3. Definite regulations regarding inspection.
4. That a licensed pawn broker be not allowed to carry on any other business.
5. That the punishment for an infringement of the Act be increased.

BUILDING BY-LAW

A great deal of discussion has appeared in the City Press regarding the new Building By-Law. Your Executive took the position that the by-law should err on the side of safety and favored absolutely safe requirements. The most important point objected to was the extent to which it was necessary to thicken the walls of buildings according to the width of openings. The Branch moved for a modification of this and convened a meeting of those at present building. Our views were put before the City Architect and a committee of architects who were considering the by-law. The by-law has been modified as requested and the allowance for openings increased from 25 per cent. to 40 per cent.

TORONTO HARBOR

Water transportation from Toronto has never received the attention it deserved. Our position—situated, as we are, on the direct route between the Great Lakes and Ocean ports—is such that freight vessels in the summer months should discharge and receive much cargo.

The advantage of having regular sailings East and West and water competition in rates cannot be over-estimated.

Your Executive were of the opinion that one reason why Toronto did not have more water shipping was the lack of an attractive harbor and harbor facilities. A Committee was appointed to enquire into this and the report they presented was most instructive. It gave a synopsis of the reports of the different engineers that had reported on Toronto Harbor since 1830, and a careful outline of the present requirements. It was not so much the sewage from the city as the silt deposited annually from the River Don which was responsible for the expenditure of most of the funds at the disposal of the Harbor Commissioners. The Committee, while recognizing the seriousness of the sewage deposit, considered that the Don was doing the greatest harm.



W. B. TINDALL
Vice-Chairman, Toronto Branch, 1904-05.

The following reasons for coming to this conclusion were given :

1. Sixty per cent. or over $3,000 of the money expended annually for dredging is on account of the deposit from the Don.
2. This expenditure is preventing other improvements from being made.
3. The annual expenditure represents the capitalization of a sum more than sufficient to complete the work which is estimated to cost about $60,000.
4. The land that would be available, in a short time, to the city by the filling in of Ashbridge's Bay, would be about six hundred acres, providing a desirable situation for factories wishing to use the lake shipping and convenient also for the installation of railway sidings.

A copy of this report endorsed by the Executive Committee was presented to His Worship, the Mayor. It was understood that the Branch should work with the City Council in placing the needs of Toronto Harbor before the Government.

Before this was done, however, we were advised by Mr. John Bertram, Chairman of the Transportation Commission of the

Dominion Government, that the Commission would meet in Toronto and invited the Branch to prepare a statement of its views.

The Commission sat in Toronto on February 21st and the representations made by the Branch were supported by a number of our members. The report of the Commission has not been issued, but we believe that the claims of Toronto will receive attention.

CITY WATER SUPPLY

The need for more water in our city service is apparent to everyone, and your Executive recognized the absolute need of prompt action. Following an interview with the City Engineer and the consideration of his recommendation asking for an expenditure of $1,000,000 to increase the efficiency of the water supply, your Executive passed a strong resolution urging the Council to act on the Engineer's recommendations at once. This resolution also endorsed the recommendations for improved equipment made by the Chief of the Fire Department.

When the Council decided to submit a By-law to the property owners authorizing the expenditure of $1,000,000, we used our best efforts to have the same passed. We urged every member of our Branch by letter, and later by post-card, to vote for and use their influence to have the By-law carried. We also had attractive posters printed which were displayed in all parts of the city. There is reason to believe that the By-law would not have passed had not our Branch taken an active interest in the same.

INDEPENDENT WATERMAINS

Immediately after the Toronto Fire, your committee considered the necessity for improved water pressure, particularly in the congested district of the city. After carefully investigating this matter it was the general opinion that the pressure of our present mains could not be increased and the most feasible alternative seemed to be a system of independent watermains. The City Engineer informed us that the cost of this system would be between $400,000 and $500,000. The Branch approved of this and favored immediate action and a deputation urged this view before the Board of Control. The City Engineer and the Chief of the Fire Department are making investigations in United States cities, and we have the assurance of the Board of Control that this matter will not be delayed.

FIRE INSURANCE

This is the most serious problem that your Committee has had to deal with. It is also more far-reaching in its effects than anything that has been before our Association for some time. In my opening remarks at the first meeting of our Executive, I pointed out the necessity of thoroughly investigating the problem and among other things of showing the members of the Branch what a great saving could be effected by improving their risks.

As soon as the question was opened up the members were quite unanimous that some action should be taken. It was generally considered that the rates were too high and that the Board of Underwriters did not treat the risks they carried with due consideration, and that their system of inspection was not satisfactory.

In November last, a circular letter was sent to the members of the Branch asking for particulars regarding the insurance they carried. The replies brought forth an expression of opinion from our members and a general approval of the investigation. The returns from less than 30 per cent. of our city members showed insurance to the amount of $7,000,000.

While this investigation was in progress our city was visited by the serious conflagration of April 19th. Immediately following this, the Underwriters increased the rates on commercial risks in what they described as the congested district by $1 on the $100, and on commercial risks outside the congested district by 50c. on the $100. This was considered a most arbitrary and unreasonable action, and a special meeting of the Branch was convened to consider the same. Your committee wished to take this matter up fairly and frankly and have the same discussed with the Board of Fire Underwriters. Everyone realized the unfortunate position of the Fire Insurance Companies and expected some increase, but nothing like the increase that was put in force. Your committee tried on two different occasions to arrange for a conference with the Board of Underwriters, but was unsuccessful. It was then decided that a statement regarding the fire insurance situation in the city should be prepared, and the same was published in the daily press. This showed that the insurance companies had been spending about 35 per cent. of their premiums for commissions and expenses. It further showed that the average loss in Toronto for the last eighteen years had been $328,000. The average annual premium was estimated at $2,190,000, and although these figures were disputed, no figures were produced to disprove them. It was further estimated that the increase in premiums would mean an additional $1,500,000.

The report speaks for itself in other particulars, and I will not go into detail here.

Your Branch has been steadily working on the problem. We have been in touch with different organizations and insurance companies in England and the United States. We recommend to the Executive Council that a special insurance committee should be appointed to take up the question from a Dominion standpoint. This committee was appointed aud has been working some time. When it reports we trust that every member of our Branch will give their recommendations proper support.

Other matters dealt with by Mr. Murray were the action of the Executive in assisting to secure the election of a desirable School Board in January last and the work of the Committee of the Executive on the Technical School Board. He also referred to the entertainment that had been extended to the visiting members of the Association who attended the annual meeting held in Toronto in September last, and complimented the Branch on the general increase in its membership. The action of the Branch in dealing with the removal of the Toronto Observatory, the expropriation of land south of Front street by the Railways, efforts in connection with English and Welsh exporters of coal who were anxious to secure a market in Canada, and the effort to see if it would not be possible to arrange for towns in certain sections of the Province to celebrate the Civic Holiday on a fixed date, were reported on.

Mr. Murray closed his report as follows :

I cannot surrender the chair of the Toronto Branch without thanking the members of the committee for their generous help. Many meetings have been called, and at each the large attendance showed that the work of the year has had careful consideration. Some of the committee were sufferers by the big fire, but even that calamity did not prevent them giving their time and interest for the general welfare of the members.

I wish especially to refer to the hard work of our Secretary, Mr. Fred. Stewart. With indefatigable energy, untiring attention, good judgment and persistent perseverance, he has rendered valuable assistance to the Executive, carrying out his instructions, making appointments and attending to the unusually hard work of the Branch this year in a manner deserving the hearty approval of the members.

The best wish I can have for my successor is as hard-working a Vice-Chairman and a committee as has been my support, as lenient in overlooking short comings as they did with mine, and as enthusiastic for the success of the Toronto Branch and the general welfare of the Association.

Mr. Murray's report was received with much applause. Mr. P. W. Ellis moved a vote of thanks to the Chairman and his Committee, and referred to the work that they had accomplished in complimentary terms. Mr. J. O. Thorn seconded this motion.

Mr. W. K. George then took the chair and after referring to Mr. Murray's efforts and the efforts of his Committee put the motion to the meeting and it was carried unanimously.

The election of officers and committees for the ensuing year was then proceeded with and resulted as follows:—

EXECUTIVE COMMITTEE--TORONTO BRANCH, 1904-1905

Richard A. Donald, Chairman; W. B. Tindall, Vice-Chairman; Members of Committee—Hedley Bond, P. H. Burton, C. N. Candee, J. W. Cowan, Robt. Crean, P. W. Ellis, John Firstbrook, Ed. Freyseng, Geo. C. Gale, Cromwell Gurney, S. R. Hart, C. B. Lowndes, J. S. McKinnon, John Northway, A. S. Rogers; Ex-officio Members of Committee—Past Chairman, W. K. George, J. O. Thorn, W. P. Gundy, J. P. Murray.

Nominations by the Toronto Branch for representatives on the Executive Council of the Canadian Manufacturers' Association. 1904-1905:

P. H. Burton, C. N. Candee, R. J. Christie, J. W. Cowan, Richard A. Donald, L. V. Dusseau, W. P. Gundy, Geo. Heintzman, D. T. McIntosh, J. S. McKinnon, P. McMichael, Jas. P. Murray, Frederic Nicholls, F. B. Polson, Thos. Roden, A. S. Rogers, W. B. Rogers, A. F. Rutter, J. T. Sheridan, T. A. Staunton, Wm. Stone, A. W. Thomas, J. O. Thorn, W. B. Tindall, Henry Wright, S. M. Wickett.

INDUSTRIAL EXHIBITION

Representatives from the Toronto Branch on the Industrial Exhibition Association for 1904-1905:—Messrs. Geo. Booth, W. K. George, W. P. Gundy, Geo. Heintzman, W. K. McNaught, Jas. P. Murray, H. G. Nicholls, W. B. Rogers, T. A. Russell, J. T. Sheridan, W. A. Strowger, J. O. Thorn.

After the elections were held, the Chairman, Mr. Jas. P. Murray, called Mr. Richard A. Donald, the Chairman-Elect, to the chair. Mr. Donald acknowledged the honor that had been done him in a neat speech, and assured the Branch that the different matters that would come before the Committee would receive his careful attention.

The meeting then adjourned.

MONTREAL BRANCH ANNUAL MEETING

The Executive Reports on the Year's Work.—Excellent Address by Chairman Ballantyne.—Mutual Insurance Plan Approved of.—Election of New Officers.

THE fourth annual meeting of the Montreal Branch of the Canadian Manufacturers' Association was held in the Reading Room of the Montreal Board of Trade on Monday, August 29th, at 3 p.m. The meeting was presided over by Mr. C. C. Ballantyne, the Montreal Chairman. Others present were Messrs. J. J. McGill (Vice-Chairman), Geo. Esplin, R. C. Wilkins, D. Lorne McGibbon, J. E. Mathews, Hon. J. D. Rolland, C. W. Davis, E. Tougas, R. R. Stevenson, J. H. Sherrard, Wm. McMaster, John Baillie, Jeffrey H. Burland, J. S. N. Dougall, L. H. Packard, S. H. Martel, Clarence F. Smith, S. W. Ewing, V. Guertin, Geo. E. Drummond, W. S. Campbell, Ald. G. W. Sadler, J. W. Hughes, A. V. Roy, A. Hawkesworth, H. Michaels, A. L. Caron, D. J. Fraser, Col. R. Gardner, T. Esmond Peck, R. N. Tombyll, J. A. Elder, John Duthie, C. O. Beauchemin.

EXECUTIVE COMMITTEE REPORT

The report of the Executive Committee was read by the Secretary, Mr. E. H. Cooper. It discussed the many important questions which were dealt with during the year, and which are briefly referred to here.

MONTREAL INDUSTRIAL EXHIBITION

Although the Committee did not feel itself able to express a sanguine opinion in regard to the probable ultimate success of a Montreal Exposition, it accepted the invitation of the promoters to appoint five representatives upon the Provincial Directorate. It is understood that the Association will not pledge its co-operation until there is some fair prospect of the realization and success of the Exhibition.

DELAYS IN SECURING EXPRESS PARCELS

During the year the Executive received frequent complaints in regard to the slow delivery of express parcels from the Customs Examining Warehouse, and after correspondence with the Minister of Customs and Mr. R. S. White, the Collector of Customs, improvements were made in the Customs buildings with the object of removing the difficulty.

REBATE OF DUTIES TO HARBOR COMMISSIONERS

The Committee corresponded also with the Minister of Customs in regard to the report that the Board of Harbor Commissioners of Montreal would be granted a rebate of the duties paid on materials imported for the construction of the new steel sheds on the harbor front. The committee expressed the opinion of the manufacturers of this city that if a rebate were given even to the Harbor Board rather than to the contractors, the interests of the domestic manufacturers would be prejudiced. Assurances were received that neither the Board nor the contractors would be allowed a rebate.

MUNICIPAL AFFAIRS

The Municipal Council passed by-laws to impose license fees on lumber and wood yards, all manufacturing establishments using varnish, gasoline, oils or other inflammable materials, and also on motors in factories. The principle involved in these questions is discussed in the Chairman's report. The committee made representations opposing these licenses. That regarding motors has not been enforced, but owing to a legal technicality the representations regarding the other items will probably have to be repeated at a later date.

A serious attempt was made by one of the leaders of the Council this spring to pass a by-law preventing the erection of factories within a certain large area of the city. The Executive addressed the Council upon this by-law, and while sympathising with its object, pointed out that in the prescribed area there were a number of streets that would be improved by the accession of factories. The petition also contended that manufacturers already situated within the area should have all their rights preserved and be able to extend or re-erect. It is not likely that the by-law will come up again.

NATIONAL QUESTIONS

Upon a number of national questions the Committee has co-operated with the Executive Council. A resolution was forwarded to last year's annual meeting suggesting that the Government should import nothing except through importers; instances were adduced where goods imported free of duty found their way into the regular channels of trade. Later in the year, upon the suggestion of the Manufacturing Grocers' Section, the Executive recommended that the Executive Council should urge the Government to enforce the Adulteration Act, a question upon which some action has already been taken. Immediately after the Budget Speech, the Committee passed a resolution, which was forwarded to the Executive Council, stating that the request of this Association for a tariff revision had not been fairly met, and that the Association should adopt some positive means to secure the necessary tariff changes. A system has been adopted whereby this Branch is now consulted by the Executive Council upon all national matters before final action is taken. Recently the Committee has been consulted upon the advisability of the Association forming an Insurance Department, and in view of the existing high insurance rates, it was considered commendable to provide some relief for the members. It is quite understood that the Association will be in no way liable for the financial responsi-

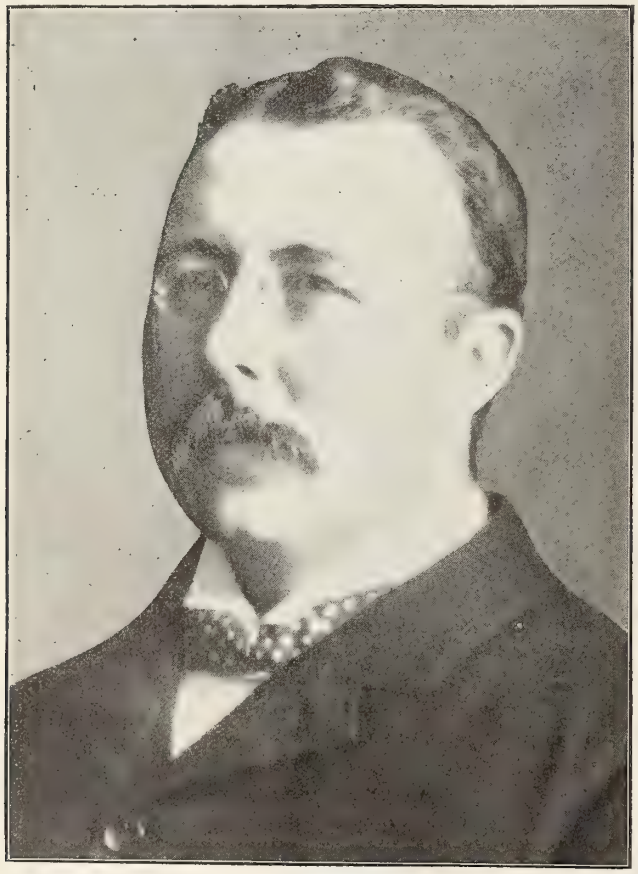
bility of this department. The proposition will be placed in detail before the annual meeting to be held in Montreal in September.

PROVINCIAL LEGISLATION

The Association opposed most strenuously the Government's Bill to follow the lead of Ontario and impose a tax upon Extra-Provincial Corporations and Joint Stock Companies doing business in this province. The idea of the provinces raising funds by setting up barriers, the one against the other, is indefensible, and the fact that this Province has imitated Ontario and British Columbia in this regard is lamentable. Nova Scotia has also followed suit this year. It is legislation that should be disallowed by the Dominion Government.

THE MONTREAL BRANCH

The Committee reported the Branch to be in a progressive condition. The membership to date is 308. During the year new quarters have been obtained in the Board of Trade



J. J. McGILL,
Chairman, Montreal Branch, 1904-05

building and they have been comfortably furnished. Two new sections have been formed, the work of developing export trade has been prosecuted, and altogether it has been a busy year.

Unfortunately they had been able to retain Mr. McMaster only two months in the position to which he had been elected last year, and just as the Committee was compelled to accept his resignation, the Vice-Chairman, Mr. W. W. Watson, had been stricken down and passed away.

A resolution was passed expressing "the keen realization of the great loss sustained by Mr. Watson's untimely removal" and forwarded to Mrs. Watson. The report also referred feelingly to the death of the late Mr. Samuel Coulson.

Mr. J. J. McGill has been chosen Chairman of the Local Arrangement Committee in connection with the Annual Meeting of the Association to be held in Montreal on Sept. 20, 21 and 22. A series of functions has been arranged and the Committee trust that the local members will co-operate in making pleasant the visit of the outside delegates.

FINANCE COMMITTEE

Appended to the report of the Executive Committee was that of the Finance Committee giving in detail the expenditure of the Branch. It urged the members to increase the membership in Montreal and thereby increase the funds available to carry on the work.

CHAIRMAN'S ANNUAL ADDRESS

The Montreal Chairman, Mr. C. C. Ballantyne then delivered his address.

He referred to the loss the Branch had sustained by the ill-health of Mr. W. McMaster, who was unable to continue in his position as Chairman of the Branch, and to the death of Mr. W. W. Watson, the Vice-Chairman. Mr. Ballantyne then dealt with questions of civic importance and laid down in no doubtful terms a policy that met with the approval of all. It is to be regretted that his remarks have had to be abbreviated for publication. They were in part as follows :—

My term of office has been only nine months, but I feel I can report a full year's work and progress. The membership of the Branch has grown from 248 to 308 members, an increase of 52, and the Branch now represents a capital of not less than $73,197,000.

It is not my intention to remark at length upon the national features of our work; these will be dealt with fully by our President at the annual meeting of the Association. I wish to make only one remark, and that is to assure him and his Executive Council that they have the unqualified and unswerving support of the members of the Montreal Branch in the stand they have continued to take upon the need of a tariff revision. The people of this country are, I believe, convinced both of the sincerity and the wisdom of our counsel. This country has decided to become an industrial as well as an agricultural nation, and the people must look to an Association of industry for advice as to the best policy to adopt to advance the establishment and progress of manufacturing. They also see that what is advocated for our own particular industry will be beneficial to those other great interests, agriculture, mining, fishing, etc.

MUNICIPAL AFFAIRS

Upon several Municipal affairs our organization has been obliged to advocate our opinions during the year. I hope the City has, for the last time, entertained the idea of imposing a special tax upon any line of industry. We were obliged to oppose such legislation at different times, and I would here express the hope that our Association would at all times strongly oppose such inequitable methods of taxation. I do not mean to infer that we should oppose every form of increased taxation. I am not even sure that our present rate of taxation is sufficiently high, and I feel I am at liberty to say that, if the City Council should make out a good case showing its present income is not sufficient to meet its obligations, the manufacturers of the city will be the last to complain at the prospects of an increase. We realize that the Council must have finances, and we are perfectly willing to pay whatever is necessary for the good government of the city. We only insist that taxes should be levied equitably.

Nor is the wisdom of levying heavy water rates, in order to raise funds to pave the streets, apparent. The charge for water should be a business charge based upon the cost of production, not only in justice to our private citizens, but more particularly in justice to our manufacturers, in whose costs water rates are an important item. It is not in the interests of the city that the cost of manufacturing should be made high in comparison with the cost in competing cities. The manufacturer in Montreal pays more at present than his confrères in other Canadian centres. A good civic management should place the rates on a business basis. It may be argued that the city cannot afford to reduce its income by $500,000. I affirm that, if the city requires more revenue, it should secure it by just legitimate taxation. A bold, business-like policy is required at the City Hall, and, now that we have a Council

presided over by such a capable business man as His Worship, Mayor Laporte, I know of no better opportunity to have matters set straight.

Another handicap to the manufacturers of this city is the high price of gas, for which there is no legitimate reason, as it is sold at much cheaper rates elsewhere. The fact that the local company supplies gas for furnace use at a rate of 60 cents, or one-half of the ordinary charge for lighting is conclusive proof that the rate of $1.00 for factory purposes and $1.20 for lighting is extremely high. The City Council should seriously consider whether or not it should exercise its option to take over the plant at an arbitration value, but I would suggest that if it should decide to do so, it should be clearly understood that it could not be operated under civic management, but given over to another company, which, I believe, could be done on favorable conditions.

PROVINCIAL AFFAIRS

The most inimical piece of Provincial legislation that was brought to the attention of our Association this year was the Compensation Act introduced into the Legislative Council by the Hon. Mr. Archambault. Under the existing law, as interpreted strictly, that person through whose fault or negligence an accident occurs bears the responsibility. Under the proposed Bill, which is likely to be pressed next session, the employers are held responsible for all the consequences of any accident, even though they may not be in fault, to the same extent as they are liable when the accident is caused by their own fault. In other words, the consideration of fault is eliminated, and the employer must recompense either the injured, or the family, for all accidents, irrespective as to how they occurred, except when committed intentionally, which, of course, is never proven. This bill was strongly supported by the Honorable the Attorney-General of the province.

And it would appear from the remarks made by him that this most dangerous heavy burden is being placed upon the employer because he is able to afford it. I should like to point out that, while it is the employer who secures the profits of the enterprise, it is also he who finances the losses.

I believe manufacturers should be compelled by strict police regulations to render their machinery as harmless as possible, but having done so, I strongly affirm they are not to be held responsible for fortuitous events or the imprudence or carelessness of workmen. I believe it would be in order to have legislation enacted that would prevent the court from going beyond that point.

The Minister claims that the Bill would restrict litigation but, after examining the measure, I am convinced its chief result will be to increase litigation. If the proposed bill should ever become law, it would be the death knell of many industries in this Province and at the same time be no guarantee of compensation to the workmen. It should have our unyielding opposition.

FIRE INSURANCE

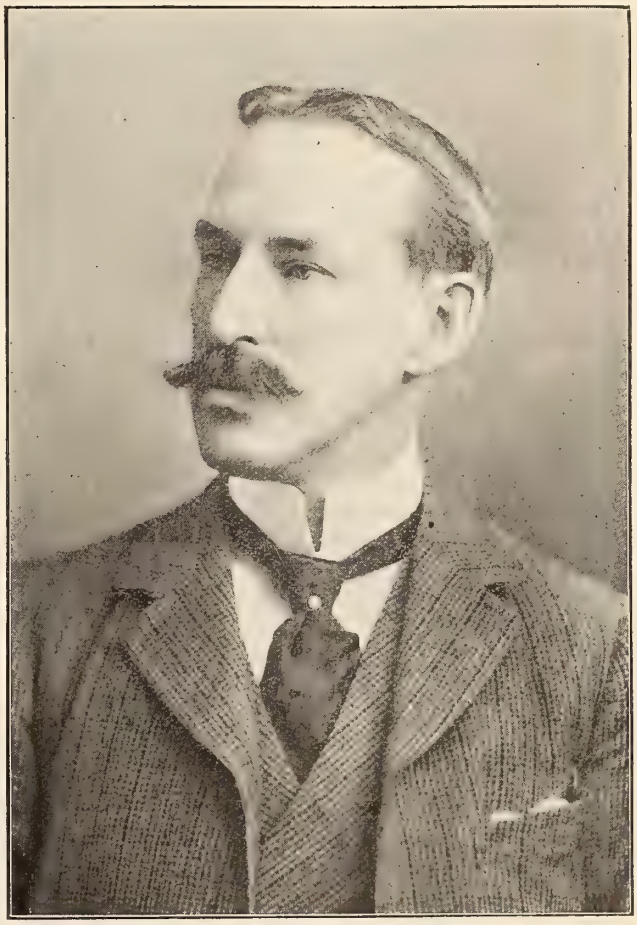
It is quite patent to every Canadian business man that the Canadian Fire Insurance business, not only in Montreal, but throughout Canada, is in a very undesirable condition. The elements of this condition are, first, that a great volume of business is being placed with United States corporations who have adopted modern methods, and, second, that Canadian industries that are continuing to insure in Board Companies are being burdened with abnormally high premiums, sometimes reaching as much as the total expense of taxes, rent, fuel and light.

I am pleased to know that the Insurance Companies have at last decided to adopt the system of "specific" rating which the manufacturers have been urging for some time.

The Canadian Fire Underwriters Association's policy in the past, of rating different classes of manufacturing businesses at fixed rates, irrespective of the individual character of the risk, has always been to my mind, a most peculiar way of doing business.

The Canadian Fire Underwriters Association and the Insurance Companies have not attached enough importance to the use of sprinklers and other fire appliances. As a consequence, United States Insurance Companies to-day have the large majority of the safe manufacturing risks in this city, at rates that are profitable to them. Why then, I ask, should not the Canadian Fire Underwriters Association and the Insurance Companies urge all manufacturers to put in sprinklers and to provide all modern fire precautions, and rate each risk on its merits and keep the insurance of the Canadian manufacturers in the country.

The recent increase of 50 cents in the congested districts of the city has brought it home to us that some definite action must be taken to ameliorate affairs. I am not inclined to take the view that the city is without fault in this matter. There is much to be done, particularly towards increasing the pumping capacity, so that there will be a reserve in the winter months, and also towards



LT.-COL. JEFFREY H. BURLAND,
Vice-Chairman, Montreal Branch, 1904-05.

making uniform and increasing the size of the water mains in the congested district.

And yet we must bear in mind that the city has done much in the past three years to improve the fire-fighting service, improvements which have received scant recognition at the hands of the insurance companies. Those of us who have had dealings with the Board Insurance Companies know that they adopt every pretext to maintain, or increase rates. This last general increase, made upon a letter, intended merely and patently to hurry the Council in the purchase of boilers, is only one instance.

The sooner the system of commissions is abandoned the better, for I am convinced it will change the whole tenor of the insurance business. The fact that about 35 per cent. of the premiums received by Canadian Board Companies is consumed in expenses of management as compared with the expense of 6 to 9 per cent. on the part of the United States Factory Mutual Insurance Companies, is striking evidence of their lack of business methods. Even on sprinkled risks, United States companies

quote rates in this city at times from one-sixth to a half of the lowest rate offered in Canada. There are concerns in this city of several hundred thousand dollars capital virtually paying their dividends from the saving effected by insuring in United States companies, who are wide awake enough to operate on a modern scientific basis.

I heartily commend the movement within this Association to form a Mutual Fire Insurance Company, and, as a member of the Committee appointed by the Executive Council to draft a plan, I would assure you that a definite proposition will be laid before you at our annual gathering in September, conservative in its inception, but comprehensive in its ultimate ambition. We feel assured you will give it your hearty support as you do any other Branch of the Association's work, in order that ultimately we may bring back to Canada the insurance which circumstances have compelled us to place across the frontier.

And now, as I retire from office I beg to thank you for the honor conferred upon me by the executive in electing me to this position, and also to thank the members of the Executive for their support throughout the year. I assure you I esteem the chairmanship of the Montreal Branch of our great organization as an honor and mark of regard of no mean order. At the same time I congratulate you upon your choice of my successor. Mr. McGill is one of our most enthusiastic and faithful members, a man of more than ordinary business ability, a staunch Canadian, intimate not only with national but with provincial and municipal manufacturing conditions, and well qualified in every respect to fill the high position for which you have selected him.

In addition, I would ask the Montreal members to give the Association more than their passive support. Our organization has a reputation for positive action, a reputation that can only be maintained by the constant interest of its members in the work undertaken. I leave the treatment of all the achievements of the Association during the past year to our worthy President. The magnitude of our work, and the possibilities of our Association for the national good, provided it has the active interest and the hearty co-operation of each and every one of its 1500 members can hardly be understood.

Mr. Geo. E. Drummond moved a vote of thanks to the Chairman which was unanimously adopted. Mr. Ballantyne in replying attributed much of the year's success to the support of the Executive Committee and the Secretary.

ELECTION OF OFFICERS

The election of officers was then proceeded with, and as Mr J. J. McGill had been the only nomination for the Chairmanship, he was declared elected by acclamation.

The elections resulted as follows :—

Vice-Chairman, Lt.-Col. Jeffrey H. Burland.

Executive Committee, Messrs. C. C. Ballantyne, J. H. Birks J. S. N. Dougall, T. J. Drummond, Geo. Esplin, S. W. Ewing, O. Faucher, Col. R. Gardner, Chas. B. Gordon, Edgar McDougall, D. Lorne McGibbon, Wm. McMaster, Robert Munro, Hon. J. D. Rolland, Ald. G. W. Sadler, Clarence F. Smith, R. R. Stevenson, W. T. Whitehead, D. Williamson.

BRITISH COLUMBIA BRANCH

Pacific Coast Members in Annual Convention —Grievances of Salmon Canners and Lumbermen—Dominion Exhibition for New Westminster—Officers 1904-1905.

THE annual meeting of the British Columbia Branch Canadian Manufacturers' Association was held in the office of the Association, 421 Granville Street, Vancouver, B.C., at 11 a.m., August 1st.

Mr. D. R. Ker, the Chairman of the Branch, presided, and the following other members were also present : J. G. Woods, R. H. Alexander, J. G. Scott, L. A. Lewis, E. H. Heaps, F. W. Burpee, C. M. Beecher, C F. Jackson and F. M. Robertson Secretary.

The Secretary read a notice calling the meeting, and presented the minutes of the last annual meeting of the Branch which was held on July 30th, 1903. These were regularly adopted.

SECRETARY'S REPORT

The report of the Secretary, Mr. F. M. Robertson, was then presented, and upon motion of Mr. Woods, seconded by Mr. Alexander, was incorporated in the minutes of the meeting. The report is as follows :

REPORT OF SECRETARY

Mr. Chairman and Gentlemen: I have much pleasure in giving you a short synopsis of the business of this Branch of the Association during the past twelve months, part of which time I have had the honor of acting as your Secretary.

The last annual general meeting was held on the 30th July, 1903, at which arrangements were completed for the entertainment of the visiting eastern manufacturers, who duly arrived on 28th September following. Our members here, I think, can look back with pleasure to this, the first visit to the Coast of their eastern confreres and I have no doubt the profit to this Province resulting therefrom is already apparent.

The principal work of this Branch during the past year has been connected with the lumber and salmon-canning industries of the Province. In the former, although little has been achieved to remedy the existing evil, no stone has been left unturned in the effort to secure remedial legislation, and I think the way is well paved to place the matter still more strongly before the Government at the next session of the Dominion House. In the latter industry the wishes of the majority of the canners have, to a great extent, been carried out almost solely by the efforts of the Association, and the success so far attending the establishment of traps has proved that their contentions were wise ones.

The membership has increased during the past year from 35 to 67, largely owing to the efforts of your late Secretary, Mr. Stein, whose trip through the upper country in the interests of the Association resulted in the securing of many new members in that district. I have found considerable difficulty in securing new members owing to the fact that the majority of industries have associations of their own which have calls upon the time and the purse of the manufacturers. I hope the members will co-operate with the Secretary in endeavoring to make the coming year a record one in the number of new members.

The work of the Association up to the present time has amply proved its usefulness and power and it has now become necessary for all enterprising manufacturers to join its ranks.

F. M. ROBERTSON, *Sec'y for B. C.*

INSURANCE

The announcement was made that the Association was carefully investigating the insurance question with a view to establishing more equitable conditions and rates. No definite plan had as yet been submitted to the members. The question, however, was discussed somewhat thoroughly, and the meeting placed itself on record as favorable to having the Association provide facilities to lower the cost of insurance to Canadian manufacturers.

The following resolutions were also passed by the meeting.

DOMINION EXHIBITION, 1905.

Moved by Mr. J. G. Wood, seconded by Mr. E. H. Heaps :

That whereas the Annual Exhibition known as the "Dominion Exhibition," conducted under the patronage of and receiving financial assistance from the Government of Canada, has never been held in the Province of British Columbia ;

And whereas it is desirable in the interest of the Trade and Commerce of Canada that the Eastern and Western Provinces should be more closely drawn together in matters of trade ;

And whereas for want of proper knowledge of the manufacturers of the Eastern Provinces, a vast amount of business goes

from this Province to other countries, a large part of which might be retained in Canada ;

And whereas the holding of said Exhibition in British Columbia, would tend to draw attention to the immense natural resources of the country and advance the development of the same, to the advantage of the whole Dominion.

Therefore be it resolved that this Branch of the Canadian Manufacturers' Association request the Honorable the Minister of Agriculture, to name British Columbia as the Province in which the Dominion Exhibition of 1905 shall be held ;

And be it further resolved that in the opinion of this Branch the city of New Westminster, B.C., would be the most suitable place (all things considered) for the holding of said Exhibition.

LUMBER DUTIES

Moved by Mr. J. G. Scott, seconded by Mr. Burpee :

That this Branch of the Association wishes to place on record its appreciation of the excellent help rendered by the Association's General Secretary, Mr. R. J. Younge, to the deputation which recently went to Ottawa to ask that a duty be placed on lumber and shingles, and we further wish to remind the Association of the necessity of keeping this a live subject until adequate protection is granted to the lumber trade.

The meeting also expressed the desire that the Transportation Manager of the Association, Mr. W. H. D. Miller, should be present to present the claims of the British Columbia members before the Board of Railway Commissioners when that body convened in Vancouver.

The following officers for the ensuing year were then regularly elected :

Chairman—R. H. Alexander.

Vice-Chairman—W. T. Bullen.

Executive Committee—Messrs. H. Bell Irving, J. G. Woods, G. I. Wilson, J. G. Scott and C. F. Jackson, Vancouver ; Messrs. J. A. Sayward, D. R. Ker, B. R. Seabrook and H. J. Scott, Victoria ; Mr. Wm. Munsie, Ladysmith ; Mr. J. Palmer, Chemanus ; Mr. L. A. Lewis, New Westminster ; Mr. F. W. Jones, Golden ; Mr. F. G. Wolfenden, Armstrong ; Mr. F. W. Aldridge, Trail ; Mr. William Beatty, Arrowhead ; and Mr. W. C. Wells, Palliser. B.C. Vice-President—Mr. John Hendry.

Representatives on Executive Council—A. C. Flumerfelt Alex. McLaren, E. H. Heaps.

A special committee was also appointed to deal with Provincial Legislation during the coming year. The members were urged to attend the Annual Convention to be held in Montreal in September.

MANITOBA BRANCH

Report of Annual Meeting held at Winnipeg —Year's Work Reviewed and Officers Elected

THE third Annual Meeting of the Manitoba Branch of the Canadian Manufacturers' Association was held in the Board Room of the Board of Trade, Winnipeg, at 11.30 a.m. on July 27th, 1904. Mr. Geo. F. Bryan, the Chairman of the Branch, presided at the meeting and there was a representative attendance of Winnipeg manufacturers.

The Annual Report was presented by the Chairman. It outlined briefly the work accomplished by the Branch during the past year and showed an increase in the provincial membership of three. At the conclusion of this report, Mr. R. J. Younge, General Secretary of the Association addressed the Branch with regard to the work being carried on at the Head Office. Details were supplied concerning the direct work accomplished by the standing committees of the Association, and the members of the Branch were urged to make a fuller use of the facilities provided for them by the Head Office of the Association. In this connection the meeting expressed a unanimous desire to have the assistance of Mr. W. H. D. Miller, the Association's Transportation Manager at the time when the Board of Railway Commissioners should sit in Winnipeg.

The Tariff question, the Dominion Exhibition, and a number of other matters were referred to briefly.

The following officers were elected for the ensuing year :—

Chairman—Geo. F. Bryan.

Vice-Chairman—L. C. McIntyre.

Manitoba Vice-President—E. L. Drewry.

Manitoba representative on Executive Council—D. E. Sprague.

Executive Committee—E. L. Drewry, G. J. Maulson, J. McKechnie, D. E. Sprague, M. Bull, E. F. Hutchings, R. Muir and A. Kelly, of Brandon.

A LETTER FROM YUKON

A Favor Granted to United States Coasting Steamers Regarded as a Vested Right—Withdrawal of the Privilege Causes Threats of Retaliation

The following letter has been received from a citizen of Dawson City, Yukon Territory :—

When the authorities of Washington State approached the British Columbia authorities not long ago with a proposition that the former contribute to the support of a fish hatchery on the Fraser river in return for some concessions, a wise writer in a Vancouver paper warned his fellow citizens not to consider the offer, for if the people from the other side were granted any privileges or courtesies in our hatcheries, they would in a few years come to believe they had vested rights in those hatcheries, and there would be another international complication on our hands.

Just such a thing has now occurred. Back in 1897, and in the succeeding years, the Canadian Government, to facilitate trade with the Yukon, granted year by year (by yearly proclamation) permission to United States steamers to carry Canadian goods en route to Dawson via St. Michael. This was an annual suspension of the Canadian navigation laws in the interests of foreign steamers and foreign corporations, as against the interests of Canadian steamers and corporations and as such has been bitterly resented by the latter. As a matter of course the same kind of law aimed against Canadian steamers has been in force on the other side for dozens of years. It is as well to admit, with some regret, that most of the narrow and unneighborly clauses in the navigation laws of Canada, have been borrowed almost entire from the navigation laws of the United States.

REGARDED AS A VESTED RIGHT

The privilege granted as a favor to United States shipping, has now come to be regarded as a vested right, and when it is no longer appreciated as a privilege, its suspension calls for immediate "retaliation."

The fact is that the favor granted to United States steamers has been the cause of our seeing a number of British vessels laid up at Dawson for nearly a whole season at a time, because even if they went to St. Michael, except under contract with one of the big United States corporations, they would be denied the privilege of taking a cargo of British goods from St. Michael to Dawson. That there are now not many British vessels here available for that trade, merely illustrates the fact that not being given a chance to secure the trade which is rightly theirs, British ship owners have not built steamers for that trade. If wanted they would be built at once, and would furnish employment for scores of Canadians, as officers and sailors, who would make Dawson their home.

By treaty with Russia before the cession of Alaska to the United States, Britain secured the free and untrammeled navigation of the Yukon river to its mouth for ever, on terms of perfect equality with the vessels of any other nation. Therefore British vessels in carrying British goods from St. Michael to Dawson would be entitled to all the privileges enjoyed by United States vessels. The ocean carriage of the goods from Vancouver to St. Michael is a simple matter. It is an easy matter for the big United States corporations to change the register of some of their vessels on the ocean and river route to British register.

The United States has never been known to grant to Canada any privilege in trade, where she did not insist on obtaining a "quid pro quo"—or two of them if we may put it that way. Therefore we may assume that when our neighbors grant any bonding privilege to Canadian goods across the narrow Alaska strip, they have secured like privileges elsewhere (only more so). Such is the case. There are more United States goods carried in bond over Canadian railways for the convenience of merchants and consumers in the United States in one week, than there are carried over the White Pass Railway in any year.

If the United States Government withdrew the bonding privileges over the Alaska strip, and Canada retaliated by cutting off United States bonding privileges elsewhere, the latter would be the loser in

the end. It is only ignorant English and United States orators who persist in believing that Canada has no ice free winter ports, and is therefore at the mercy of the United States, and would suffer greatly by the loss of bonding privileges across portions of the United States. Canadian goods which now go in bond across the State of Maine to St. John and Halifax, would have to go by the somewhat longer Intercolonial route through Canadian territory. United States business men know that their country would be equally hit in the matter of cancelling bonding privileges, so that it is only the politicians and newspapers which advocate that kind of retaliation.

Supposing that at the instigation of Seattle, the bonding privileges enjoyed by Canadian merchants over the Alaska strip, should be withdrawn. It might be a fine thing for Yukon in the end. While it would knock out Canadian goods there for the time being, it would ensure the immediate construction of an all Canadian railway to Yukon, and inside of a couple of years the axe would fall on United States goods there as it never fell before.

Seattle would do well to be careful what course of retaliation its merchants advise, because Canada is in no mood, since that Alaska boundary farce, to stand any more nonsense from her kind neighbor over the line, and when it comes to retaliation, the odds are decidedly in favor of Canada, as the United States has run the length of its tether in that line, while Canada has hardly commenced as yet. The United States exports yearly into Canada over $120,000,000, which would be more liable to be affected by retaliation than Canada's exports into the United States, which only amount to half of the above.

VEXATIOUS CUSTOMS REGULATIONS

The United States customs regulations, which must be complied with in shipping Canadian goods into Yukon, are very vexatious, far more so than the Canadian customs regulations. This will not surprise anyone familiar with the picayunish spirit which actuates the Government and people south of the 49th parallel.

Let us give one instance of United States customs regulations. In bonding Canadian animals (horses, cattle, etc.), through Alaskan waters to Skaguay, if one or more of them die in United States waters, the owner must pay duty on the dead animal. In shipping United States cattle through Canada in bond, if any animal die in transit the owner is merely required to furnish satisfactory proof of its death and the disposal of its carcass in transit, to escape duty while passing through Canada.

But this all points to the urgent need of an all Canadian outlet to the whole of Yukon and Northern British Columbia. It is becoming more and more apparent that the future of Canadian trade in that vast territory is of too great importance to be jeopardized at the caprice of United States customs regulations. An all-rail line from Kitimat Arm or Port Simpson on the British Columbia coast, or a line from Edmonton northwesterly to the Peace river, over the low divide to the headwaters of the Pelly river and down it to the Yukon, are the two rival routes most in favor. Each of them is practicable at a reasonable cost, as in neither case are the engineering difficulties as great as those encountered in the construction of the Lake Superior, and also the Thunder Bay-Rat Portage divisions of the C. P. R.

The people who were shipping goods from Dawson this spring to fill urgent orders by wire from the new Tanana mines, had an experience of the U.S. customs at Eagle, Alaska, that they will not readily forget. In order to fill some orders, Canadian goods had to be sent. When the steamers arrived at Eagle (about 100 miles north of Dawson) they were held up there from one and a half to two and a half days while the cases were burst open to search for Canadian goods. When the owner could not prove that the foreign goods were manufactured in the United States and were returned U. S. goods they had to pay the high duty imposed by U. S. customs on Canadian goods. Their experience there has been a lesson to some of our foreign brethren who have been in the habit of complaining of the Canadian Customs at Dawson.

The regulations in force in Yukon to regulate the shipment of perishables, which cannot be sent around by the long Behring Sea route, are very simple and afford every facility to U. S. merchants doing business with people in their own territory of Alaska. These perishables come over the White Pass and down the Yukon to Dawson, and on down the river to their destination in Alaska.

It may be well to point out to those who talk retaliation, that until some 400 miles of the Central Alaska railway are built, if they are ever built, from Valdez on the North Pacific to Eagle on the Yukon river, across middle Alaska close to the Canadian boundary, all middle Alaska, including the Tanana mines, Circle or Birch Creek mines, and Fortymile mines on the Alaska side will be dependent on the Whitehorse-Dawson route, for all the perishables needed to supply those communities, as well as for much of the rush orders to fill up on.

The season of 1904 will see a large quantity of U. S. goods bonded through Canada (Yukon Territory) to Alaska points. Thus any retaliation on Canada, if she enforces her shipping regulations in the North, can be promptly met by the withdrawal of bonding privileges through Canadian territory.

SUGGESTIONS FOR CANADIAN MANUFACTURERS

There are two necessary things for Canadian manufacturers and merchants to do that they may secure the whole of Yukon's trade, which is bound to remain valuable, and if quartz mining is commenced on a large scale (which is likely to be the case) it will become very valuable to eastern manufacturers, merchants and farmers.

One is the construction of an all-Canadian railway to Yukon, over which Canadian goods may be passed safely and quickly, without the vexatious delays now imposed by the U. S. customs at Skaguay. In this latter place the U. S. customs officers, in spite of promises to the contrary, have held up yearly and sold hundreds if not thousands of cases of Canadian goods from Vancouver, Victoria and elsewhere on some trivial pretext or other, such as a slight error in marking or non-description of contents.

If the same treatment was accorded to the U. S. goods improperly marked which arrive in bond at Dawson, there would be an immense amount of them held for identification, much of it sold to satisfy Canadian customs regulations, and a corresponding howl from the big firms in the Pacific Coast U. S. cities.

The second essential is that Canadian goods must be the equal in quality and convenience of the U. S. articles at the same price. As a matter of fact a large number of the Canadian manufactured products received here are equal to or superior to the United States goods they have to compete with, but some of the Canadian manufacturers and merchants persist in sending an inferior or out of date article to a market where only the latest and highest quality articles are bought by miner and business man alike. Some of these foolish eastern people think that such an out of the way place may be satisfied with anything they cannot sell in the East, but a greater mistake was never made. Yukoners are from all quarters of the earth and are familiar with all the best grades of foods and supplies produced in Europe or on this continent.

In addition to the above stated handicap, there is the prejudice of the people from the United States, who while they do not now form half of the population, are yet a very large community in the territory. Their education is so narrow and superficial that they come here with the ingrained idea that there is only one country in the world which can produce goods fit for consumption, and while they get that idea pretty well knocked out of them in a few months, yet the narrow prejudices, inherited from birth, live and are active in the conduct of business and of their purchases. Travel is the only thing that will educate the average United Stateser.

TRADE CATALOGUES

Bolts, Nails, Washers, Nuts, Etc.—The 1904 Price List of the Montreal Rolling Mills Company is a book which does credit to one of Canada's most prosperous industrial institutions. From a typographical standpoint it leaves nothing to be desired, while its attractive red leather cover at once stamps it as a publication of considerable worth. It is a splendid illustration of the silent salesman. It gives prices and specifications, down to the most minute detail, for every article manufactured by the firm, and contains besides a large amount of useful information such as will enable a buyer to select intelligently the goods best suited to his requirements. This little volume should be in the hands of every hardware man in Canada.

Carriages.—The Canada Carriage Company, of Brockville, Ont., are to be congratulated on their most recent advertising effort. It consists of a *de luxe* edition of a style book, illustrating a few of their standard lines of Phaetons, Stanhopes, Traps, Surreys, etc. A super-calendered paper has been used, upon which the photo-engravings stand out with splendid effect. The press work is in two colors, and the frontispiece consists of a colored reproduction of their well known nameplate—a lion's head surrounded by a wreath of maple leaves. Altogether it is a most creditable publication, and one of which this enterprising company may well feel proud.

Mattresses.—The Marshall Sanitary Mattress Co., Ltd. are circulating a small brochure entitled "About a Good Mattress." Its introduction is taken up with a comparison of the ventilated mattress and the ordinary kind made of hair or felt, and strong arguments are put forward to show the many advantages possessed by the former. It is highly recommended by physicians for hospital use, and is coming widely into favor among hotel men. This "ventilated" idea has been successfully applied by the Company to pillows and cushions of all sorts, for chairs, yachts, carriages, etc. A number of interesting testimonials and aphorisms are interspersed through the reading matter, and at the back is to be found a fac-simile reproduction of the five year guarantee accompanying every mattress.

THE TANNING INDUSTRY IN CANADA

How Leather is Manufactured From the Raw Hide—Remarkable Tendency Towards Specialization—Past Growth and Future Prospects of the Industry

ONE of the respects in which man differs from every other species of animal life is that he is born into this world without any protection against the heat or the cold. The bird has its feathers, the dog, the cat or the cow has its fur or its hide, but man is absolutely at the mercy of the weather. Next to food and drink, this need for protection is his most pressing want, and to relieve this want by artificial means was one of the most serious problems that our remote forefathers were called upon to solve. The covering that most naturally suggested itself to their minds was that with which the lower animals were provided by nature. They accordingly slew the ox and the goat, and appropriated their skins. It was quickly found, however, that these skins in their raw condition were unsuitable for the purpose to which they were to be put. They must first be cleansed, dried and preserved. That some method of preserving them was speedily discovered is established by the frequent references in the Bible and elsewhere to the use of leather and dressed skins as a clothing material. The North American Indians, prior to the advent of Columbus, boasted of a civilization that included the use of leather, while the Esquimaux of the far North still employ a crude process for dressing the pelts of the bear, the seal and the walrus. The tanning industry, therefore, is by no means a modern development, though in the highly specialized form in which it exists to-day it may be said to be quite modern.



TANNING AND COLORING DEPARTMENT

The beginning of the industry in Canada, if it were possible to trace back to it, would probably be found associated with some little cross-roads tannery, erected to supply the purely local requirements of some small community in the Maritime Provinces. In common with the saw mill, the blacksmith shop and the grist mill, the tannery has helped to form the nucleus of many a thriving Canadian town. Like these pioneers of industry, too, it has in the majority of cases been allowed to fall into decay, though a number of tanneries in different parts of the country have continued to develop and expand, until at the present time they stand well to the front among the most important manufacturing enterprises of the Dominion. The first of these large plants seem to have been established between 1850 and 1860. Such firms as Shaw Bros., of Roxton Falls, the Richardsons, of Montmorency Falls, Wm. Craig & Son, of Port Hope, and the Breithaupts, of Berlin, names that are still well known among the leather men of this country, all date their origin from about that time. Latterly their numbers have been very rapidly added to, until to-day some thirty-three Canadian tanners are credited with doing an export business.

SPECIALIZATION

Of recent years the development of the tanning industry has been marked by a tendency towards specialization, consequent upon the large variety of skins and hides employed and the varying purposes for which the finished product is to be used. One establishment will handle nothing but cowhides; a second will devote its whole time to sheep skins, while a third will make a specialty of goatskins, chamois, seal, etc. Of those tanning cowhides exclusively some will make nothing but sole leather, the chief essential of which is a good wearing quality combined with a fair degree of weight; others will specialize on harness leather which calls for great flexibility, while with others again the main object is to produce a leather suitable for belting. The heavier cowhides are for the most part used for the manufacture of harness and sole leather. Hides of lighter weight, when tanned whole, are used by upholsterers for leather chairs and couches. Sides, in addition to being employed for the purposes already mentioned, are made into shoes, bags, satchels, straps and bookbinder's leather. They are very little different from cowhides except that they are lighter in weight and more flexible in texture. Horse hides are manufactured only to a limited extent in Canada. When tanned they are known as Cordovan (from Cordova in Spain, a town celebrated for its leather manufacturers) and are used largely as a shoe leather, though also employed for making laces, razor strops, etc. Pigskins are said to make the best saddle seating. They are exceedingly tough, and may be used to advantage wherever great durability is desired, as in footballs, or boots for football players. Sheepskins supply a great many kinds of leather. They possess little strength and no solidity, and are consequently used only for articles that are not subjected to any great amount of wear. Pocketbooks, bookbinding, gloves, linings for hats and shoes, novelties and various kinds of imitation leather are all made from sheepskin. Goat skins, on the other hand, are much stronger and more expensive; they produce the variety of leather known as morocco. From deer skins and seal skins still further varieties are produced, while the mention of kid, alligator, Russian leather and patent leather will at once suggest the extent to which specialization may be carried in the tanning industry.

Black shoe leathers are produced in large quantities in Eureka and Hopewell, N.S., St. John, N B., Quebec, St. Hyacinthe and Montreal, Que., Kingston, Hastings, Oshawa, Toronto, Acton and Barrie, Ont. The manufacture of colored leather is carried on chiefly in Toronto, Barrie, Richmond Hill and Kingston. These factories all produce a certain amount of shoe leather as well, as it is their custom to blacken for this purpose such hides as are not clear enough on the grain side for colored leather. The manufacture of calfskins is usually combined with special grades of black shoe leather. Orillia, Kingston, St. Catharines, Toronto and Montreal are the chief centres of this branch of the industry. Harness leather is made in Acton, Berlin, Orillia, Owen Sound, Quebec, St. John, N.B., and Eureka, N S., and sole leather in

Acton, Berlin, Woodstock, London, St. John, N.B., and Pictou, N.S. The tanning of skins is highly specialized, there being no manufacturer who prepares both skins and side leathers. The largest sheepskin tanneries are located at Toronto, Acton, Montreal and Eureka, N.S.

SOURCES OF SUPPLY

As already pointed out, the small tanneries depending for their supply of hides upon local butchers and farmers have almost ceased to exist. With their limited output they have found it impossible to compete with the larger establishments where specialization and increased economy of operation have reduced the cost of production to a minimum. It might naturally be inferred that with the shutting down of these smaller tanneries the hides formerly consumed by them would be simply transferred to the larger centres of the industry, but such has not been the case. The supply from such a source is far too uncertain for the large dealer to place any dependence upon, and moreover, the carelessness of the local butcher in removing the hide from the carcass frequently renders it unsuitable for the manufacture of the finer grades of leather. These hides therefore are now largely shipped out of the country. Up to within a few years ago the tanner of cowhides was almost entirely dependent for his supply upon foreign countries. Immense quantities were imported annually from the stockyards at Chicago, as well as from Argentina, France and England, the hides of Canadian cattle killed in Great Britain forming no small part of the total. It is true that from these sources we still purchase hides to the value of over $4,750,000 a year, but at the same time it is a matter of considerable satisfaction to know that Canada is herself better able year by year to supply the raw material necessary for this important industry. The growth and extension of Canadian abattoirs has been the means of ensuring for our tanners a steady supply of hides which, though still inadequate as to quantity, are admirably suited to meet all requirements as to quality, and considering the immense possibilities of our West as a cattle-raising country, and the extent to which live stock is at present exported to be slaughtered abroad, it is easily conceivable that the time will soon come when our tanneries will be independent of foreign countries for their raw material. The probability is however that tanners of skins will always be large importers on account of the more favorable conditions under which sheep and goats can be raised in other countries. Our supply of this material comes largely from South America, South Africa, New Zealand, Australia and India, some of it by way of England and France.



CHROME TANNING DEPARTMENT

MATERIALS USED FOR TANNING

The familiarity of the ancients with the process of tanning may be accounted for by the fact that tannic acid is found, to some extent at least, in nearly every plant that grows. Oak bark is generally regarded as the best agent for tanning, though by reason of its scarcity and its costliness it is now but little used. Canadian tanners of cowhide use almost exclusively the bark of the hemlock tree. It possesses a certain amount of coloring matter and resin which impart to the finished leather a hardness and a brittleness not found in leather tanned with oak bark, but these disadvantages are now fairly well overcome by the use of bleaching liquors and oils. Hemlock bark, which is a by-product in lumbering, comes for the most part from the large sawmills of Northern Ontario and Quebec. The transportation charges from these points to the consuming centres of the industry bring the cost of the bark to the tanner very high. In addition to this the bark is year by year becoming scarcer, owing to the strong demand for hemlock lumber, so that prices have advanced in proportion. In the face of these difficulties there has been a marked tendency among tanners towards the increased use of bark extracts and chemicals in conjunction with the ordinary bark liquors. As yet these extracts are not prepared in Canada, but are brought into the country from the United States and Europe.

Some hides are tanned almost entirely by the use of chemicals, as in the case of chrome leathers. Acid tannages are also employed extensively for sheep and goat skins, chrome and sumach being the principal agents. Other chemicals are used occasionally, such as alum, valonia, dividivi, myrabolams, etc.

THE PROCESS

Upon entering the hide house of the tannery, cowhides are first placed in large vats of pure water to soak. The object of this is to soften them, and to remove any salt, blood, or loosely adhering bits of flesh or fat. When they have been thoroughly softened they are put through what is known as a fleshing machine. This is provided with a rapidly revolving roller in which are set knives somewhat resembling the blade of a skate. The application of this roller to the flesh side of the hide quickly removes any particles of foreign matter that may be still adhering.

The next step is to remove the hair. To do this effectively and without injuring the grain the pores must be opened up or swelled. In the case of dried hides this is usually done by the sweating process. Green hides on the other hand are limed. The lime is contained in solution in vats about 6 feet deep, whose tops are flush with the floor of the building. On the inside of these vats, near the top, are narrow ledges which support the slats over which the hides are hung. After the lime has penetrated every portion of the cuticle, the hair may be easily removed by scraping with any kind of blunt instrument. This is done both quickly and thoroughly by means of the unhairing machine, which is constructed very much on the same principle as the fleshing machine.

From here the hides are conveyed to immense washers before being placed in the tanning liquor. In the case of green hides that have been limed it is customary before tanning to treat them to a bate. This consists of a leach of chicken manure, and has the effect of neutralizing the lime in the pores. For goat skins it is found more advantageous to use a leach of dog dung.

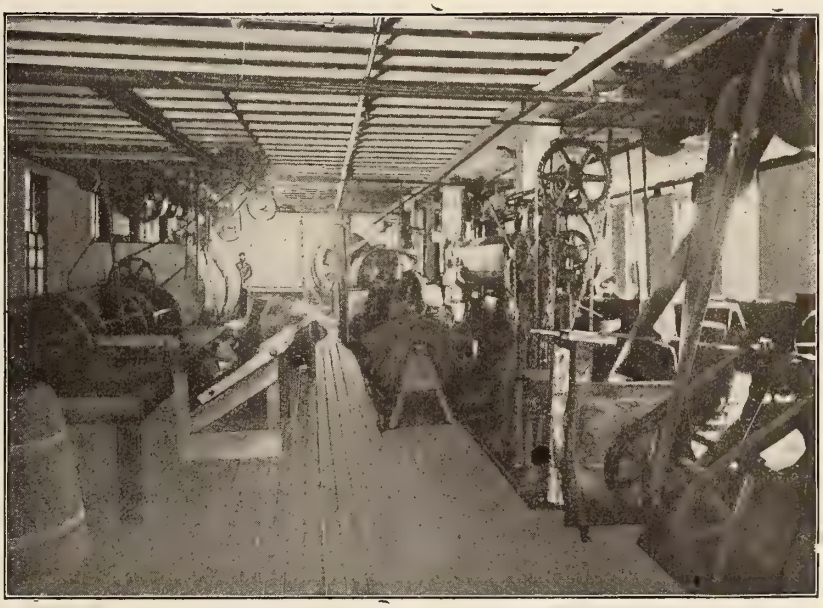
The hides are now ready for the tanning vats. Of these there are a great number, containing bark liquor in increasing degrees of strength. A separate building is usually provided for preparing the bark leach. The bark, which has been thoroughly dried, is

first ground in a mill to about the size of a grain of wheat, and then distributed through various tanks. A leach is obtained by allowing water to percolate through the bark in the first tank. To increase the strength and density of this leach it is pumped out from the first tank into the second, where it absorbs more tannin from a fresh lot of bark, then into a third and fourth tank, until finally it becomes of the proper density. In the first of the tanning vats a comparatively weak liquor is used, and the hides are changed from one solution to another every two or three hours. After ten or fifteen days they reach a vat containing a solution of from ten to twelve degrees of strength, and later on they are subjected to the action of still stronger liquors. Every vat is provided with agitators, worked by machinery which keep the liquor stirred up, prevent the tannin from settling at the bottom, thus ensuring an even tan for the whole hide.

Owing to the rapid absorption of the tannin in the primary vats, the liquor in these can be used but once, though the following liquors may be put through the leaches again two or even three times before they become unfit for use.

In all, from 80 to 90 days are consumed by cowhides in this process, though calf, sheep and goat skins are as a rule prepared in much less time.

The hides are now placed in what are called layaway vats, where they lie on an average of 70 days in strong liquor. After being removed from here they require to be thoroughly dried. To hasten this process they are first placed in powerful presses which squeeze out most of the moisture. They are then hung up in a room through which a current of fresh air is kept constantly circulating. The pressure of the presses will probably have caused the grain side to become wrinkled and uneven, and to remove these defects the hides are put into a milling machine, which both rubs and pounds them until every trace of roughness has been removed.



SHEEPSKIN FINISHING DEPARTMENT

Skiving is the next process. This consists in planing down the flesh side so as to make it perfectly smooth and reduce the hide to a uniform thickness. An ingenious machine is used for this purpose, provided with a keen blade set between two pairs of rollers. The leather is firmly gripped by the rollers, and the blade may be so adjusted as to remove any thickness of leather desired. The same machine is also used for splitting leather. Any little imperfections that may be missed in this operation are removed by the shaving machine, which is provided with much smaller knives so that it may be applied to any portion of the leather without touching the rest.

The leather is now scoured by machine, then dried and afterwards moistened again, to admit the stuffing or weighting material. This consists of tallow or grease, the amount depending largely upon the purpose for which the leather is to be used. If it is desired to produce a leather which will readily turn water, it is obvious that the more grease it can be made to hold the better. On the other hand, a leather that is not going to be exposed to water requires little or no stuffing. By means of the stoning-out process the tallow is thoroughly worked into the leather, and any surplus grease is removed. For this purpose powerful machines are used, which hammer and iron the leather most effectively. A further process of rubbing, called slicking-off, is done by hand, the workmen performing this duty requiring to be men of great muscular strength.

The leather is now ready to be colored or blackened. Until recent years this work was done altogether by hand, but latterly machines roughly resembling mangles have been introduced which seem on the whole to work very well, though some tanners still prefer the hand method, as they believe it gives more uniformly satisfactory results. An application of oil is now necessary in order that the leather may retain its black or color, after which it is again worked and rubbed, or "set," as it is technically called.

All that now remains to be done after washing and glassing the flesh side so as to remove any smudges of color is to impart the final finish to the grain of the leather. Frequently it is desired to give the product a pebbled appearance, or it may be necessary to make it look like a piece of kangaroo, elephant, alligator or pig skin. While the leather is still in this soft and impressionable condition from the oil dressing, it can easily be made into an imitation of any known variety by means of steel dies. These are regularly made in the form of cylindrical rollers and are revolved under great pressure against other rollers with a perfectly smooth surface. The leather is fed between these with its grain side to the die, and the impression thus received proves a permanent one, for the leather quickly dries out.

In the preparation of goat and sheep skins there are naturally a number of deviations from the process outlined above, but what has been said will serve to illustrate in a general way the steps to be gone through in the manufacture of leather from the raw hide.

BY-PRODUCTS

In the tanning and dressing of the hide nothing is wasted. Keen competition and a general tendency towards a lowering of prices have compelled the tanners to look sharply after the little economies. Wherever there is a possibility to save a few cents it is taken advantage of. The bark from the leaches is conveyed by carriers to the boiler room where it is burned as fuel. The bits of fat or grease removed by the fleshing machine are sold to the soap makers, while the hair is eagerly bought up by plasterers, carpet manufacturers and others. The skivings and scraps of leather taken off in the splitting and shaving machines are used in the manufacture of leather board. Even the sediment left from the settling vats where the sewage is purified is turned into money by selling it to farmers to be used as a fertilizing agent.

PRICES

One discouraging feature about the leather situation from the tanner's point of view is the fact that while the cost of both raw material and labor has steadily advanced, the value of the finished article has in many cases fallen away very materially during the past few years. Grades formerly selling for 15 and 16 cents a foot now bring only from nine to twelve cents. Harness and sole

leather, which are sold by the pound, have not suffered to the same extent, though with these, too, a noticeable reduction in value has taken place. Profits have accordingly been greatly lowered, and it is only by exercising the utmost care in the matter of details and ordering all operations in the most economical manner that a reasonable margin can be realized. Hemlock bark has advanced in price from 75 cents to $1.00 a cord over what it was five years ago, until it now costs the manufacturer between $9.00 and $10.00 delivered. During the same period the price of labor has advanced anywhere from 10 to 25 per cent. according to the locality, while the general tendency with hides has been towards a steady depreciation in value. Added to these difficulties, the transportation companies have aggravated the situation by establishing an import rate on leather which, as compared with the domestic rate, discriminates strongly in favor of the foreign manufacturer, so that under the prevailing low rate of duty a competition has been induced which from the tanner's standpoint is anything but healthy.

TARIFF

Generally speaking the tariff on rough undressed leathers such as sole and belting is 15 per cent., while on waxed, dressed or glazed leathers it is 17½ per cent. Glove manufacturers importing tanned or dressed sheep and goat skins for use in their own factories pay a duty of only 10 per cent. It has been the contention of the leather men for a number of years that these rates of duty fall far short of affording the industry the protection it requires. A maximum rate of 25 per cent. would seem to be none too much, and even then, under the operation of the preferential tariff, England with her cheap labor and advantageous import rates would still be able to undersell Canadian manufacturers in certain lines.

It has been the custom among United States and foreign manufacturers to quote to Canadian buyers of leather a rate somewhat lower than that quoted for domestic consumption, so that to some extent the Canadian leather industry has suffered from the evil of dumping. This was particularly noticeable a few years ago when large quantities of foreign leather were slaughtered on the Canadian market. More recently, however, our tanners have been pleased to notice some improvement in this respect. But what has once happened may very easily happen again. The present low tariff on leather is a perpetual menace to the success of the Canadian industry, for at any moment the highly specialized tanneries of the United States might flood this country with their surplus production, inflicting upon our local manufacturers a blow from which they would not easily recover.

IMPORTS AND EXPORTS

During the fiscal year ending June 30th, 1904, the imports of leather into Canada, exclusive of leather manufactured into other commodities, were valued at $977,573. Ten years ago, in 1894, they amounted to $1,473,042, or, roughly speaking, half-a-million more. These figures are particularly gratifying, indicating, as they do, that in the face of a largely increased domestic consumption, and in spite of the adverse trade conditions under which they have been forced to operate, Canadian tanners are securing a larger and larger share of the home market. The exports at first sight would not seem to present as favorable a showing. In 1903, our exports of sole, upper and other leathers were valued at $2,169,015, while in 1904 they were only $2,150,648, a falling off of $18,367. An examination of the figures of manufactured leather, however, reveals the fact that while in 1903 we exported boots, harness, etc., to the amount of $196,000, in 1904 our exports in these lines amounted to $255,000, an increase in one year of $59,000. Our total exports of leather, therefore, really show a substantial increase, but instead of selling our rough and dressed leather abroad, there to be manufactured into boots and harness, we are finding an ever-increasing market for our wares at home, so that more workshops are being kept busy, and more value is being added to the material before it is finally shipped out of the country.

The imports and exports of raw hides and skins, dry salted or pickled, for the fiscal years 1903 and 1904 were as follows :—

	1903	1904
Imports	$5,661,313	$4,775,464
Exports	1,892,523	2,023,603

It would seem not a little strange that with imports aggregating $4,775,464 we should export hides to nearly half that amount, but, as already pointed out, we import a number of lines, such as sheep and goat skins and dried hides, that are not obtainable in this country, while our exports consist largely of what is not suited for home manufacture.

GROWTH AND IMPORTANCE

The present status of the tanning industry and its development during the past ten years are indicated by the following figures taken from the census returns of the Dominion of Canada for 1891 and 1901.

	1891	1901
Number of Establishments	802	143
Capital Employed	$ 4,071,835	$ 7,300,584
Number of Employees	4,263	3,607
Raw Material Handled	$ 6,540,566	$ 8,507,788
Value of Product	$11,422,860	$12,068,600

In explanation of the remarkable decrease shown by these figures in the number of tanneries operated, it must be said that the statistics for 1901 include only such establishments as employ a minimum of five hands, while those of 1891 include everything. For the purpose of comparison, it has been ascertained that in 1891 there were in all 170 tanneries employing five hands or over. In ten years, therefore, the number in operation has been reduced by 27, or nearly 16 per cent. Side by side with this fact is the equally surprising fact that the capital employed by the tanneries now remaining in business is $3,228,749, or about 80 per cent. more than that employed by the whole industry ten years ago. While the actual number of hands employed is somewhat less than at the time of the last census, the average per tannery is very much larger. In 1891 the number of wage-earners to a tannery was 5.3 ; in 1901 it was 25.2. The general increase in the use of machinery, and the tendency to eliminate laborious hand processes, will account for the failure of the number of workmen employed to keep pace with the capital invested, but this only furnishes an additional proof of the remarkable tendency towards centralization and specialization in the manufacture of leather.

In relation to the other manufacturing enterprises of Canada, the tanning industry ranks very high. As the figures for 1901 will show, it represents an average investment of over $51,000, with an average yearly output of more than $84,000. Considering the fact that this includes all tanneries employing as few as five hands, the showing made is a remarkably good one. A number of our larger tanneries employ a capital of $150,000 or $200,000 and have an annual production of over half a million. This is not surprising when we remember that three or four months are consumed in tanning and finishing the ordinary cowhide, and that sometimes as much as a carload a day is passed through the hide house. To handle immense stocks like this a proportionately large capital is called for. But while the purchases of raw material are very heavy the sales frequently run into equally large figures. Among the boot and shoe manufacturers it is not an uncommon thing for an order to be given for $100,000 worth of leather at a time, and instances are on record where sales have been put through involving as much as a quarter of a million.

As long as our tanneries are able to present such a showing as the above, they must necessarily play a very important part in the industrial life of our country. Their growth in the past has been steady and healthy, and in the rapid development of the West they seem to be afforded a reasonable guarantee of still further expansion. The industry has been fortunate in having at its head able men of business, and under their continued guidance it may be relied upon to give a good account of itself in the future.

★ Scientific Notes ★

COMMERCIAL USES OF APRICOT KERNELS

THE sweet and bitter almond oil of commerce is obtained for the most part from apricot pits, which are cheaper than real almonds and yield a product approximately as valuable. In certain parts of France apricots are grown on a large scale for the manufacture of jelly and marmalade, and at all the establishments where this work is carried on the pits are carefully preserved and afterwards sold to the manufacturers of oils and essences. When they have been thoroughly dried they are cracked by hand, as it is essential that the kernel be obtained in an unbroken and unbruised condition.

Sweet almonds and apricots whose kernels yield a relatively sweet oil are crushed with their brown skins ; bitter almonds and bitter apricot kernels are first blanched.

The kernels of sweet almonds and analogous fruits yield a fatty oil and an unformed ferment called "emulsin." Bitter almonds, in addition to these substances, contain a white crystalline substance known as "amygdalin." Sweet almonds yield from 40 to 50 per cent. of oil, bitter almonds from 30 to 45 per cent., and the *Prunus Armeniaca*, a species of apricot with a bitter kernel, 28 per cent. The oil of the *Prunus Armeniaca* is yellow and limpid, and contains a small quantity of hydrocyanic acid. It is ordinarily mixed with two parts of olive oil, and quickly becomes rancid.

The manufacture of the oil is an incident necessary to the subsequent extraction of the essence. The oil is used for medicinal purposes, as an illuminant and as a salad dressing. The essence, which has a much higher commercial value, is produced on a large scale at Grasse, Alpes Maritimes, which is the world's centre of perfume production.

NEW METHOD OF MANUFACTURING STEEL

It is reported that successful experiments have just been made by the Iron, Steel and Metals Manufacturing Company at Melbourne, Victoria, for the purpose of proving the value of certain patent rights for the direct production of wrought iron and steel without first producing pig iron. Only a rough idea of the process may at present be had, though trial runs with New Zealand magnetic iron sand are now being made on a somewhat larger scale than hitherto. The sand is first separated from its gangue by electro-magnetic separators, this treatment leaving a pure magnetic iron oxide. The sand is then fed from a bin into the furnace, which is entirely novel in its features, being chiefly mechanical and automatic in its operation.

The ore drops from the bin into a slowly revolving cylinder placed at such an angle that the ore travels forward continuously in it. As it does so it is heated to a dull red by the waste gases from subsequent operations. From this cylinder the ore drops into a second revolving cylinder, where the fine particles are subjected to the action of reducing gases which reduce the magnetic oxide of iron to the metallic form, at the same time permitting the particles to retain their individuality. From this second cylinder the reduced ore drops into a smelting bath at the bottom of the revolving cylinders, and the molten steel or malleable iron, as the case may be, is tapped from this wherever that operation is necessary. It will thus be realized that the process is one of great simplicity and yet of much ingenuity. Not the least interesting part of it is the use of fuel oil for heating purposes. This is employed to secure concentration of heat and direct application in the furnace work. It is found that the fuel oil possesses many advantages over producer gas as used in existing smelter practice. The work done so far has demonstrated that not only is oil a cheap fuel, quite irrespective of the capital outlay that would be required if it was decided to utilize producer gas, but it is so thoroughly under control as to ensure the best service.

The temperature at which iron ore melts is given variously at from 1,500° to 2,000° C., according to its purity.

The accurate gauging of temperature in the furnaces plays a very important part in the operations, and accordingly an installation of thermo-electric thermometers has been made at the company's works. The apparatus consists of a "couple," consisting of a platinum-iridium junction enclosed in a metal tube fully 3 ft. long, which is placed in the centre of the furnace and the temperature is then recorded on the dial of a special form of voltmeter, each division on which represents 25° C. This voltmeter reads up to 1,600° C., and is placed at any convenient distance from the furnaces. The various thermometers are connected with a switch board, which is again connected with the "couples" or tubes in the furnace. In the installation under notice four "couples" will be used, inserted in different parts of the furnace, and separately connected with the board, so that the reading of any thermometer can be taken and any discrepancy in the heat of different points of the furnace can be quickly remedied. It is interesting to notice that the voltmeter is so extremely sensitive that variations of heat down to 0.5 of a degree were easily noticeable in the trial test. The greatest temperature recorded was 1,300° C., equal to 2,340° F.—*U. S. Consular Reports*.

ELECTROPLATING ALUMINUM

A recent issue of Chambers' Journal contains the following item with regard to a new process for electroplating aluminum. "Aluminum, on account of its lightness and its great toughness when alloyed with other metals, has, since its production has been so enormously cheapened, come into general use for a multiplicity of purposes. But one great drawback to its use is the rapidity with which its surface becomes dull and leaden in hue owing to rapid oxidation. This characteristic has hitherto prevented aluminum from being easily electroplated with gold or silver, as copper may be ; but according to an announcement in the Electro-Chemical Industry, this difficulty has been removed by the discovery of a method by which aluminum can be given a coating of any desired metal. The film of oxide which covers the surface of the aluminum is removed by adding to the plating bath a small quantity of soluble fluoride, and the metal then receives a superficial coating of zinc or copper, upon which silver or gold can be subsequently deposited. The new process will doubtless be highly valued by the makers of opera glasses, photographic lenses, telescopes and other instruments.

WOOD ALCOHOL PRODUCTION

The people of the United States are speculating on the possibility of imitating the Germans in producing wood-spirit for industrial purposes. An immense amount of wood is cut down every year in the States for conversion into charcoal for the iron-foundries. But of late years, beside nearly every charcoal plant there has been raised a chemical plant, to rescue the wood alcohol. In New York and Pennsylvania eighty wood alcohol and acetic acid plants exist, which supply the iron-foundries with charcoal and turn out the spirit and acetic acid as by-products—the total alcoholic output amounting to a million and a half gallons a year. In Germany alcohol is so cheap that several forms of alcoholic motor are working. Whether this result will follow in America remains to be proved ; but there is assuredly a future for wood spirit, which only the other day was all literally lost in smoke. It is computed that now from 75 to 80 per cent. of the tree, branches and all, is utilized for the up-to-date charcoal maker.—*World Wide.*

Labor Column

VANCOUVER EMPLOYERS ACQUITTED

ANOTHER important development arising out of the strike which took place at the Vancouver Engineering Works some few months ago, has just been threshed out in the courts of British Columbia.

It will be remembered that the trouble arose over the Company posting rules changing the shop from a Union to an open one. The employees, who were Unionists to a man, resented this and at once quit work, refusing to return unless the former rules were restored. The Company were strongly supported in their position by the Employers' Association of Vancouver, comprising all the prominent business men and manufacturers of the place. The latter refused to employ in their factories any of the striking mechanics, whereupon charges of conspiracy were laid by the Unionists against the officers of the Association and against the Engineering Works for seeking to deprive them of work.

The case was tried before Mr. Justice Duff and a special jury. The defence submitted practically no evidence, though they made application for nonsuit, which was disallowed. The counsel for the defence clearly pointed out that they were not conducting a fight against the Unions. The question to be decided was whether the employers had the same right of organizing and conducting their affairs as the Unions.

The finding of the jury went to show that the intention of the Employers' Association was simply to assist the Vancouver Engineering Works to obtain an open shop. Their object was not to injure the men, and their action could not therefore be called a conspiracy. The injury sustained by the men was only an incidental misfortune necessitated by proper action in the pursuit of the betterment of trade conditions.

UNION LABEL ORDINANCE IS UNCONSTITUTIONAL

So Says Judge Miller of Louisville, in Granting an Injunction to Restrain the Awarding of Contracts in Accordance With its Terms.

AN opinion of the greatest interest and importance to employers of labor generally is that recently expressed by Judge Miller of Louisville in connection with a suit brought by a printing company of that city, to test the validity of a "Union Label" ordinance under which the city had been awarding contracts for public printing.

It appears that in 1898 an ordinance was passed by the General Council of Louisville providing that all printing, bookmaking and work of like character used or ordered by the city should bear the imprint of the recognized union label of the Allied Printing Trades' Council of Louisville. Some few months ago the city buyer advertised for tenders for a certain printing job, stating that all bids must be subject to the ordinance referred to. Three replies were received, two from union shops and one from an open shop. The tenders of the former were at the rate of $2.60 a page, while that of the latter was for $2.20, amounting to a difference of $240 in the cost of the entire work. The contract was about to be let at the higher price to one of the firms using the union label, when the open shop company, together with two of its officers in their capacity as residents and taxpayers, applied for an injunction to restrain the buyer from such action.

The attorney for the plaintiffs attacked the ordinance as being unconstitutional, in that it undertook to make a discrimination between different classes of citizens similarly situated. He urged that it restricted competition in public work, and tended to increase its cost and create a monopoly thereof; that it attempted to confer an exclusive privilege upon certain persons in violation of the constitution; and that if the contract were awarded to either of the defendant companies the city buyer would not be acting in the full exercise of their judgment or discretion, but under the constraint of the ordinance referred to.

In reviewing the case, Judge Miller stated that the legal objection to the ordinance had been well expressed as follows:

"Manifestly, if the General Council has the right to restrict competition so far as the public supplies and public contracts are concerned to those only who employ union labor, it would have the same right to pass the same character of ordinance for the benefit of non-union labor, if at any time the friends of non-union labor should gain control of the General Council. And if at any time the majority of the members of the General Council should be members of the Presbyterian Church, or the Methodist Church, or the Baptist Church, or the Catholic Church, or of any other church, or if the majority of them should belong to the Masons, or the Oddfellows, or the Elks, or any other order, they would have the same right to pass a like ordinance for the benefit of those employing members of their particular church, denomination or order. The result would be that the laws of the city, instead of being enacted for the benefit of all the citizens equally and impartially, would favor only that class who happened to be in political power at the particular time."

"It would hardly be contended," continued the Judge, "that the General Council could constitutionally require all city printing to be done in "open shops" or by non-union printers; but such a requirement would be no more unjust to union printers than the present ordinance is to non-union printers. Both classes are entitled to precisely the same consideration; neither is entitled to a preference at the hands of the law. It is elementary that our Government is conducted for the benefit of all citizens alike, and not for the special benefit of any one man over his neighbor, and that a non-union workman has no right to say that a union workman shall not be employed in public work. A union workman has all the rights before the law that the non-union workman has, and the General Council cannot constitutionally deprive the union workman of the equality."

After ruling that the ordinance was clearly unconstitutional the Judge took up the question of interference with the discretion of a city officer. The general rule was that a court of equity would only interfere when an officer was about to perform a purely ministerial duty, an act in performance of which he exercised no discretion. This case, however, did not come within the general rule. The city buyer was a public officer, and stood in the relation of trustee of the public funds for the taxpayer. It was alleged that he was about to let a contract to one of the defendants at a price $240 higher than the plaintiff's bid, and that in doing so he was acting under the illegal constraint of the ordinance, and not in the bona fide exercise of his judgment. As these statements had not been denied they had to be treated as established, and such being the case the city buyer was acting as a mere ministerial agent and was therefore liable to the process of injunction.

By this motion the plaintiffs were not asking that the contract be awarded themselves, but only that the city buyer be restrained from awarding the contract to the defendants. The city was not required by law to have these reports printed, and might conclude not to print them; moreover it reserved the right in its advertisement to reject any and all bids. In the absence of a specific statute requiring the work to be done and taking all discretion from the officer and thus making him a mere ministerial officer, he could not be required to award a contract to any particular bidder. He could be restrained, however, from acting under a void ordinance which took all discretion from him and required him to dispose of the public money against his judgment; and as the petition brought this case within the last named rule the injunction would be granted.

Industrial Activities
OF THE MONTH

Contributions of interesting news items are invited

THE MANUFACTURERS OF CANADA



NO. 5.—W. K. McNAUGHT

William Kirkpatrick McNaught was born of Scotch parents in Fergus, Ont., 1845. His early education was received at the local public and high schools, afterwards supplemented by a course in a commercial college. In 1868 he entered the employ of Robt. Wilkes, M.P., wholesale jeweler, Toronto, whom he served successively as clerk, traveler, manager and foreign buyer. In 1877 in conjunction with John Zimmerman he founded the jewelry firm of Zimmerman, McNaught & Co., afterwards known as Zimmerman, McNaught & Lowe. In 1885, Mr. McNaught retired from the wholesale jewelry business, and formed, with the late Mr. R. J. Quigley, The American Watch Case Co., Limited, of which company he is now President and Managing Director.

It would be difficult to enumerate all the important offices which Mr. McNaught has held, but it may be said that he has served the people of his City, Province and Dominion in many a good cause, and has been actively identified with almost every prominent movement for the public good during recent years.

Ever since its establishment in 1859 Mr. McNaught has been sole editor of *The Trader*, a paper published in the interests of the Canadian jewelry trade. He is the founder of the Canadian Jewelers' Security Alliance, of which he was the first Secretary. For a number of years he acted as Treasurer of the Standard Publishing Co., President of the National Club, Toronto, and President of the Athanæum Club, Toronto. Latterly he has become a Director of the Gore Fire Insurance Co. He served as President of the Canadian Manufacturers' Association in 1891-92, and for the last three years has been Chairman of the Tariff Committee. Since 1902 he has been President of the Canadian National Exhibition, Toronto.

Mr. McNaught has always been a firm believer in out-of-door sports. At an early age he joined the Queen's Own Rifles and subsequently held a lieutenancy in the 12th York Rangers. In 1875 he published a book " Lacrosse and How to Play It," which is still regarded as a standard work on the subject. He was Honorary Secretary of the National Lacrosse Association for six years and has repeatedly been elected President. In 1883 he accompanied the Canadian Lacrosse Team on a tour through England, Ireland and Scotland, taking advantage of the occasion to deliver a number of lectures on Canada with a view to attracting immigration. He has also been Vice-President of the Toronto Rowing Club for several years.

Mr. McNaught combines in himself those qualities which stamp him at once as a leader of men. Keen foresight, excellent judgment, cool determination and moral courage are combined with a genial sympathetic nature and a personal magnetism which has made him one of the most popular figures in the industrial life of Canada.

The new plant of the Maritime Nail Works was completed and put into operation about the first of August. The present building is considerably larger than the one destroyed by the fire, and includes all the improvements which the firm had in view at the time their misfortune overtook them. Their output consists principally of wire, nails, screws, rivets and horseshoes. The works employ in the neighborhood of 100 men.

Good progress is being made on the construction of the buildings for the Superior Portland Cement Co., at Orangeville, Ont. The walls are of white limestone. A large quantity of machinery has already been delivered on the ground, and it is thought that the firm will be ready to begin business within the year.

The Backus and Brooks Co. are working large gangs of men day and night on the construction of their dam, power house, flour mill and pulp mill at Fort Frances, Ont. An enormous quantity of cement will be used ; 10,000 barrels have already arrived on the ground, and 30,000 barrels more are on order. The whole work will be completed in two years, though it is expected that 1,000 h.p. will be available for use by March 1st next.

An English corporation is reported to have purchased the mining locations of The Cape Breton Coal & Iron Co. at Cacherones Lake, and it is expected that they will begin at once to operate them.

A new brick factory is to be built at Cornwall by John R. Atchison, to replace the saw mill and sash and door factory recently destroyed by fire. The municipality is assisting him with a loan of $15,000 without interest for twenty years. The electors have also agreed to exempt from taxes the mill property of the Canadian Colored Cotton Co., who are to put up a new plant employing 150 hands.

A company known as the Georgia Rock Co. has recently been incorporated in Vancouver for the purpose of opening and operating a sandstone quarry on Vancouver Island. The stone is of a buff color and very fine in quality. There is an immense supply of it, and transportation facilities are said to be of the best.

Contracts have been let for the construction of the new rail mill for the Dominion Iron and Steel Co. Its total cost will approximate $300,000, and about five-sixths of the work will be done by Canadian firms. The management expect that the plant will be in operation by February next, and that rails will be ready for shipment by April 1st.

Toronto and Montreal are to be provided with pneumatic tube systems connecting their post offices with the railway stations. Plans have already been prepared, and the work in Montreal is expected to go forward at once, but matters will be delayed in Toronto until the site for the new Union Station has been definitely decided upon.

An iron working plant is soon to be erected at Port Hawkesbury, N.S., by McNeil Bros., of New Glasgow. It will cost in the neighborhood of $35,000, and will give steady employment to 50 men.

The Canadian Westinghouse Company, Limited, have added another $250,000 to their capital stock, for the purpose of adding to the capacity of their works now approaching completion at Hamilton. A number of Canadian firms have secured large orders from the contractors, among others, Sheldon & Sheldon, of Galt, who are at work on four large fans for heating and ventilating the buildings. The fans in question will be capable of handling 152,000 cu. ft. of air per minute.

What is probably the largest single shipment of flour ever made from the Dominion is that of the Ogilvie Flour Mills Co. from Montreal to St. John's, Newfoundland. It consists of 65,000 bbls., and is all to be delivered in two months. It will take seven steamers, each loaded with two-thirds flour, to carry it all.

The Woodstock Lumber Co. have completed work on their new factory, and are now busily engaged in moving in their machinery. They have still to put up a large lumber shed and a new office building.

The plant and stock of the Boston Wood Rim Co., Limited, Toronto, has been purchased by a new concern now applying for incorporation under the name of the Hurndall Novelty Furniture Co., Ltd. They will manufacture cycle wood rims, sanitary woodwork, art furniture and wood novelties.

Extensive additions will shortly be made to the plant of the Aylmer Iron Works Co., Aylmer. Ont. It is the intention of the company to greatly increase their output and engage in the manufacture of a number of new lines.

The Princess Royal Mining Co., whose property is situated near the proposed terminus of the Grand Trunk Pacific on the Pacific Coast, held their annual meeting in St. John, N.B, recently. The Mine Superintendent reported that the smelter returns ran as high as $130 per ton.

Brown Bros., Limited, of Toronto, wholesale stationers, who were among the heaviest losers by the big fire of April last, suffered the misfortune of a second disastrous fire on August 21st. Their temporary quarters in the Queen City Curling Rink were totally destroyed, involving a loss of $83,000.

A new factory for the manufacture of waists has been established at 1853 Notre Dame st., Montreal, by I. Mishkin. The latest and most approved machinery is being installed.

OPENING WANTED

A young man holding at present a good position, desires to make a change for a position as Secretary, Manager or Assistant, in a manufacturing line preferred. He has a wide business acquaintance in Toronto of over twenty years' standing and can furnish the highest testimonials.

Please address enquiries to the Secretary Canadian Manufacturers' Association, Toronto.

NO TRANSPORTATION THIS MONTH

During the past month the Manager of the Transportation Department has been in Winnipeg and Vancouver, representing members of the Association before the Board of Railway Commissioners. We regret to announce, therefore, that owing to his absence we have been obliged to omit from this issue the regular Transportation feature of our paper.

THE MONTREAL CONVENTION.

Canadian manufacturers have their eyes turned to the Thirty-third Annual Convention which will be held in Montreal, on the 20th, 21st and 22nd of this month. This meeting will be one of the most important commercial gatherings ever held in Canada. At this period in the development of the Dominion the coming together of prominent business men in an organization representing more than $400,000,000 capital invested in manufacturing industries, to consider the important trade issues of the day, will be awaited with interest, and may be fraught with far-reaching results. The following outline of the Convention proceedings may be interesting:

Tuesday, September 20th—

This day will be devoted to the meetings of the various sections of the Association. Important trade questions affecting particular lines of industry will be considered. In the afternoon, the Harbor Commissioners of the city of Montreal will receive the delegates on board their steamship. In the evening a public meeting will be held, at which the chief feature will be the Annual Address of the President of the Association.

Wednesday, September 21st—

The first business session of the Convention will be convened at 9.30 a.m. Throughout the day the reports of the various officers and committees of the Association will be received and discussed. In the evening, the Montreal members will entertain the delegates at the performance of "The Silver Slipper," in His Majesty's Theatre.

Thursday, September 22nd—

The morning session, which will be the concluding session of the Convention, will be devoted to the consideration of the questions of Tariff and Insurance, and will be open only to members of the Association.

In the afternoon the delegates will be the guests of the President, Mr. Geo. E. Drummond, at his summer residence, Mount Saint Bruno.

In the evening the Annual Banquet of the Association will be held in the Banquet Hall of the Windsor Hotel. Many distinguished guests will be present, including Sir Howard Vincent, M.P., and Sir William Lloyd Wise, of London, England, Representatives of the Dominion and Provincial Parliaments, and many prominent men in Canadian public life.

There is little doubt but that the 1904 Convention will be the greatest in the history of the Association.

Foreign Trade News

PERMANENT EXHIBIT IN JAMAICA

MR. G. EUSTACE BURKE, Commercial Agent for Canada in Jamaica, has at length succeeded in completing his arrangements for a permanent display of Canadian manufactured goods in that Island. A prospectus has been issued, which is now being circulated among the manufacturers of the Dominion, calling attention to the splendid opportunities thus afforded for strengthening the bonds between these two countries commercially, imperially and industrially. From it we learn that Jamaica's imports for the fiscal year ending March 31st, 1903, were nearly $10,000,000, of which but $600,000 was drawn from the Dominion, as against $4,000,000 from the United States, and this, too, notwithstanding that no single item, whether farm product or manufacture, aggregating this very large amount, could not have been supplied equally satisfactorily from Canadian sources. With a little judicious advertising, therefore, it would seem that a rich trade might here be developed.

The following particulars are supplied for the guidance of intending exhibitors. The Canadian section will be opened on September 1st, 1904. Exhibits may be received at any time, but as the space is strictly limited, an early application is advisable. Exhibits may be renewed or increased from time to time. The charges for space will be at the rate of $2 per sq. ft., with a minimum charge of $20 per annum. Special arrangements, however, may be made for extensive displays of furniture, pianos and organs, carriages, agricultural implements, carts and wagons, lumber goods, leather goods, paper goods, cordage and heavy hardware. The charge for wall space is $1 per sq. ft., payable half-yearly in advance. Customs business, arranging, fixing, and also the cost of fixtures, screens, counters, etc., insurance against fire, dusting and keeping clean, answering enquiries and distributing price lists and literature are included in the above charges. *All samples and exhibits will be carried free of freight charges on application to Messrs. Pickford and Black, Halifax.* Packages should be addressed "Anglo-Canadian Commercial Museum," Kingston, Jamaica, together with name and address of exhibitor. Sales of sample shipments of food products, and the booking of orders for all goods shown or catalogued, will be undertaken on a commission basis.

The opportunity is an excellent one for obtaining an effective advertisement at a minimum cost. Exhibitors are bound to benefit by the promotion of trade relations with the Jamaicans themselves, and in addition to this advantage every effort will be made to attract and induce the many thousands of tourists and transient passengers constantly visiting the islands from Europe, the United States, South and Central America, Panama, Mexico and Cuba to inspect the various exhibits.

Further particulars regarding any special arrangements desired will be promptly supplied on application to the Manager, Anglo-Canadian Commercial Museum, Box 28, Kingston, Jamaica.

COMMERCIAL TRAVELERS' TAX

In the reports of the Department of Trade and Commerce information has been given from time to time with regard to the taxes charged commercial travelers in different parts of the world. For the convenience of Canadian manufacturers who may be interested in extending their export business, we give below a summary of the regulations existing in the principal countries from which reports have been thus far received.

Argentina.— Commercial travelers, whether selling goods in Argentina or merely showing samples and soliciting orders, must secure licenses. The cost of these in the town of Buenos Ayres and the national territories is $50 per annum. In the other provinces of the confederation fees are levied at the rate of from $42 to $715 per annum, depending in some instances on the nature of the business. Samples of value are charged the regular import duty, which is refunded if they are exported within six months.

Australia.—There is no commercial travelers' tax in Australia. Where a traveler carries samples that are dutiable he is required to pay duty at the first port of entry. He then obtains an inter-state certificate, which enables him to take them to any state of the Commonwealth and to have a refund of the duty should he take them out of the country.

As each state must receive credit for the revenue derived therefrom by customs duties, it is necessary that on leaving each state the samples should be packed under the supervision of a customs officer, and a charge of two shillings and sixpence per hour is usually made for this service. The packages are then sealed, and the seals must remain unbroken until he reports at the custom house of the state to which he is going.

Belgium.—Reciprocal treatment is accorded to commercial travelers in Belgium, and consequently no restrictions are imposed on them, nor is any license fee charged.

Colombia.—No licenses are required by commercial travelers. Small samples weighing up to 25 kilos are admitted free. The import duty paid on other samples is returned if the samples are exported within twelve months.

England.—Commercial travelers who are agents for foreign firms must take out certain licenses when they have warehouses or offices in England, but as understood by Canadians, generally speaking there is no tax.

France.—Commercial travelers are taxed in the same proportion as the country of their orgin taxes travelers arriving from France. The rule, however, is interpreted very liberally, and is put in force only when French Consuls abroad report certain nations as taxing French commercial travelers.

Germany.—Every foreign commercial traveler must, in order to carry on operations in Germany, obtain a license from the German authorities. Only samples or patterns may be carried about, not the actual goods offered for sale. Samples which cannot be used for other purposes may be imported free of duty. Tobacco, foodstuffs and the like, must in every instance pay the duty.

Greece.—The ordinary traveler soliciting orders has no formalities to go through in Greece. If resident in Greece and carrying a stock, he is required to take out a trade license. Samples of no commercial value enter free of duty. Other samples have first to be marked by the Customs officials, and security given for the payment of the import duty in the event of their not being exported again within twelve months.

Italy.—Certificates of identity and licenses are required only in the case of countries which have adopted restrictive measures against Italian commercial travelers. Samples of no commercial value intended to represent articles of which they form part are exempt from duty. This exemption embraces also samples of paper and tapestry of sufficient size to show the whole pattern, as well as samples of porcelain, tissues and other goods, comprising various patterns on one article, provided that the importer consents to render the same unfit for use.

Japan.—Agents, middlemen and brokers pay a tax of 5 yen per 10,000 yen on wholesale transactions, and 15 yen per 10,000 yen on retail business done. (1 yen=49.8 cents). They also pay 1 yen annually for each of their employees and 4 per cent. on their

office rent. In the case of commercial travelers who do not sell their goods to customers direct no special tax appears to be payable. Articles temporarily imported as samples are not subject to import duty, provided they are exported again within six months and security therefore is deposited at the time of importation.

Mexico.—Travelers who confine their work to the city of Mexico or the immediate Federal district are free from all taxes. In the interior of the country the tax levied varies in accordance with the number of commodities handled. Duty must be paid on samples when imported, but if a declaration is made of intention to export again within a certain time the duty will be refunded upon furnishing proof that the terms of the declaration have been complied with.

Netherlands.—The foreign commercial traveler must take out a license at the port of entry, which costs a trifle over $6. A description of the goods is given, when the traveler is supplied with government seals. A deposit of 25 per cent. of the value of the goods must be made as a guarantee of their exportation. Generally speaking, articles of little trade value are admitted free of duty, even when unaccompanied by the traveler.

Norway and Sweden.—Foreign travelers, upon their arrival, are required to take out a trade license at the nearest police court. This license must be paid for in advance, and at the rate of about $27 per month or fraction thereof. It must be presented to the police in every town where an attempt is made to do business, the police testifying to its being presented without any extra charge. For any violation of this rule the traveler is subject to a fine of from $27 to $135.

South Africa.—The licenses enforced by the various colonies are as follows: Cape Colony, £25 per year; Natal, £10; Transvaal, £20; Rhodesia, £25; British Buchuanaland, £10; Mozambique, $10.

United States.—No license is required in any state from commercial travelers who merely carry samples and take orders. Articles of no mercantile value, imported as samples not for sale, are not subject to duty or to formal entry.

West Indies (British).—Generally speaking, no tax is imposed on commercial travelers. On the contrary, every facility is afforded them for prosecuting their business.

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

28 A correspondent in **Royal Lane, Cape Coast**, asks for catalogues and price lists of Canadian goods for the purposes of sending indents from same.

29 **Agencies—Antwerp**—A firm in **Antwerp, Belgium**, that has been established for thirty years and sells direct to the interior of the country through their travellers, state that they have special facilities in the way of warehouses, etc., for handling goods, and desire to represent Canadian manufacturers. They send four references.

30 **Berlin**—A **Berlin** firm of agents and general merchants desires to be placed in touch with Canadian exporters requiring such representation in Germany as they can offer.

31 **Capetown**—A firm with business houses in **Capetown, Johannesburg, Durban and Port Elizabeth**, desires to represent Canadian manufacturers.

32 **Constnatinople**—The representative of a firm of bankers, manufacturers, representatives and commission agents in **Constantinople, Turkey**, writes us from St. Louis and asks to be put in touch with Canadian manufacturers of goods suitable for the Turkish market. The population of Turkey is about 38,000,000 with practically no manufacturers. Constantinople has a population of 1,000,000 and is the distributing centre. The general Turkish tariff is 8 per cent.

33 **Copenhagen**—A **Copenhagen** firm with good business experience desires to correspond with Canadian exporters who are seeking a market in Denmark for any goods except provisions.

34 **Japan**—A **Belgian** who has been in Kobe, Japan, representing Belgium houses, for the past few years has recently gone into business on his own account as a commission agent and desires to act as the representative of Canadian firms. He is working particularly the **iron, steel,** and **paper** branches of the trade. In addition he handles such articles as **paint, varnish, dyes, rubber goods**, etc. He has had an experience of over 12 years in the importing business. Business is all done against confirmed bank credit. References may be secured.

35 **London**—A business man shortly leaving for a journey through Canada desires to make arrangements with good commission or shipping firms for representation.

36 **Osaka**—A representative of an important importing and exporting house in **Osaka, Japan**, is at present in America and wishes while here to arrange to represent Canadian manufacturers. They state that the time is very opportune to make connections and the outlook for a large increase of imports in **iron, steel, machinery, wood pulp,** and other articles is very bright.

37 **Sao Paulo**—A correspondent in **Sao Paulo, Brazil,** writes us for detailed information regarding the position Canada is in at present to export goods to Sao Paulo. Our correspondent states that British goods with them always receive a preference. English and German goods are bought on six months' credit subject to interest. United States goods are bought in New York on three months' credit. Their buying at present is done through merchants on account of conveniences offered. They invite direct correspondence from Canadian manufacturers and will be glad to receive sole agencies for their district.

38 **Agricultural Implements**—A firm in **Constantinople** desires to be appointed the representative of a Canadian manufacturer of the above. He states that Turkey imports large quantities.

39 **Apples, Dried.**—A correspondent in **Rotterdam, Holland**, asks for quotations on Canadian shipments of dried apples. He wishes to purchase the same.

40 **Apples, Evaporated.**—A general commission merchant and consignee in **Hamburg, Germany**, wishes prices on evaporated apples. Between 2,000 and 3,000 boxes are desired.

41 **Apples, Green.**—A correspondent in **Antwerp, Belgium**, asks for the addresses of shippers of Canadian green apples.

42 **Birch Boards.**—A regular correspondent of the Association in **London, Eng.**, wishes quotations on Birch Boards ½ in. to 1 in. x 12 in. and wider in car load lots.

43 **Butter.**—Enquiry has been made by a **British** firm for names of Canadian butter shippers prepared to supply same in boxes about 14 lb. weight.

44 **Butter, Boots and Shoes, Leather, Preserves, Poultry (canned), Produce, Inks, Cheese, Watches, Vegetables (desiccated), Vegetables (evaporated), Maps, Salmon (canned).**—An import and export merchant in **Antwerp, Belgium**, established in 1865, and who sends references well known to the Association, wishes to secure information from Canadian manufacturers of the above lines, with the end in view of purchasing their goods.

45 **Butter and Cheese.**—A commission house at **Bristol** for the sale of butter and cheese from Canada is seeking to establish a connection with a reliable exporter.

46 **Canned Fruits, Vegetables, Salmon, Lobsters, Cereals in Packages, Flour in Bags.**—A **London, Cannon Street**, agent who has been known to the Association for a number of years, desires to represent Canadian shippers in the above lines.

47 **Chair Legs and Spindles**—A firm in **Manchester, England**, have sent a blue print showing the exact styles of **chair legs** and **spindles** they require. They ask for prices c.i.f. Manchester and London and state that a large trade can be done.

48 **Codfish**—A correspondent in **Hamburg, Germany,** wishes to be placed in communication with shippers of dried **cod fish** packed in barrels.

49 **Cottonwaste**—Large dealers in cottonwaste in **Termonde, Belgium,** desire to correspond with Canadians wishing to purchase or sell the same.

50 **Cultivators and ploughs**—A company in **Melbourne, Australia,** who already represent a number of manufacturers of different agricultural implements desires to secure the sole agency for a Canadian firm of manufacturers of spring tooth cultivators and ploughs. They forward as a reference their bankers.

51 **Dried Fruits, Timber, Furniture, Frozen Meat**—A well-known firm in **Cairo, Egypt,** with whom the Association has had considerable correspondence states that there is a good market for the above and desires to communicate with Canadian shippers.

52 **Dry Goods**—A departmental store with head quarters in **Capetown** and a branch store in **Johannesburg,** desires to get in touch with Canadian shippers of all classes of goods sold in dry goods stores. The firm carries on a retail business.

53 **Flooring—Hardwood**—A firm of contractors and builders in **Preston, England,** established since 1876 desires to purchase 70 or 80 standard of kiln dried tongued and grooved maple flooring (best quality) 4½" x 1¼", 4½ x 1", and 4½" wide x ¾" thickness. Delivery should be included Liverpool or Preston and payment will be made draft against ship's papers. References are forwarded.

54 **Flour and Wheat**—A **South African** house is desirous of opening up relations with a Canadian exporter for the supply of flour and wheat.

55 **Food Products**—A firm of food product packers in **Liverpool, Eng.,** have requested to be placed in touch with exporters of peas from Canada.

56 **Fruits (canned)**—The names of shippers of canned fruits in Canada are asked for by a gentleman having a good connection with the trade in England and who is desirous of working on a commission basis.

57 **Furniture and Woodenware**—A firm in **Yorkshire, England,** are anxious to get the agency for a Canadian manufacturer of the above lines. They have travellers covering the whole of Great Britain and Ireland and have a well-established trade with the best people in the furnishing line. A member of the Association has a personal interest in this company and can give information necessary regarding them.

58 **Grain, Hay, Apples**—Enquiry has been made by an agent in **Vienna** for names of Canadian exporters of grain, hay, apples (dry and green) who may be contemplating an export trade with Austria.

59 **Handles (broom)**—A **New York** export commission house asks for quotations on basswood broom handles 50" x 1⅛" in car loads. Payment, cash in 10 days. A reference is given.

60 **Labels**—An English house would be glad to accept the agency for any good Canadian house dealing in anything appertaining to the printing and stationery trades.

61 **Lumber**—A manufacturing firm in England has asked to be placed in communication with lumber exporters or dealers in Canada who cut up hard maple for mangle rollers.

62 **Lumber.**—Enquiry is made by a firm in **Liverpool, England,** respecting large supplies of sawn lumber from Canada, for making boxes in which to pack tin-plates.

63 **Machinery.**—A firm of export merchants and engineers' agents in **Glasgow, Scotland,** desires to represent a Canadian manufacturer of engineering and other machinery. They state that they have good connections and would gladly submit reliable references.

64 **Machinery (Evaporating)**—A firm in **Melbourne, Australia,** personally known to the Association, desires to procure in Canada machinery for drying or evaporating potatoes.

65 **Marmalade and Jams.**—Enquiry is made by a store officer in charge of one of H.M. Naval Yards, for supplies of marmalades and jams from Canadian factories.

66 **Mica.**—A firm in **England** buying large quantities of Mica (ambered, smooth) are seeking supplies from Canada.

67 **Paper, Half Grease and Paper Ribbons.**—A well known correspondent of the Association in **Adelaide, South Australia,** sends samples of the above articles used for fruit packing, and supplies of the same are desired from Canada.

68 **Poles, Oak.**—Enquiry is made by a firm in **London, England,** for names of likely parties in Canada to ship oak poles about two inches in diameter, with bark left on, and in lengths of about twelve feet.

69 **Provisions, Grain and Flour.**—A young man in **Christiania, Norway,** who has for the last few years been manager of a large importing and exporting firm, has started business on his own account, and desires to secure the agency for Norway and Sweden of Canadian shippers of flour, grain, oatmeal and groceries. He has called on the importers in the countries named. Prices must be c.i.f. Norwegian points and commission asked is 2 per cent. He states that imports this year will be large on account of the short supply from Russia. A well-known United States firm is given as a reference.

70 **Saws**—The names of a few Canadian manufacturers of saws have been asked for by a gentleman in **Kildare, Ireland.**

71 **Snow Shoes**—Enquiry comes from **Paris, France,** for the names of manufacturers of snow shoes.

72 **Sticks, Dowel**—Supplies of round wood dowel sticks in hard white birch from Canada have been enquired for by an English firm.

73 **Tin, Steel and Mattress Wire, Bed Ticking, Furniture**—A firm of merchants, importers and manufacturers' agents established in the wholesale business for over ten years in **Melbourne, Australia,** desires to sell on commission the above mentioned goods and also other lines. They send references.

74 **Woodpulp**—An import and export commission agent in **Ludwigshafen, Germany,** desires to get in touch with Canadian exporters of wood pulp.

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MICA COVERING

For Steam, Heat and Cold Water Pipes, Flues, Furnaces, Boilers, Etc.

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Proved by experts in Canada, Great Britain and the United States to be highest nonconductor in the world.

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Show your wisdom by equipping your premises with our **Fireproof Windows.** It lowers your Insurance Premiums.

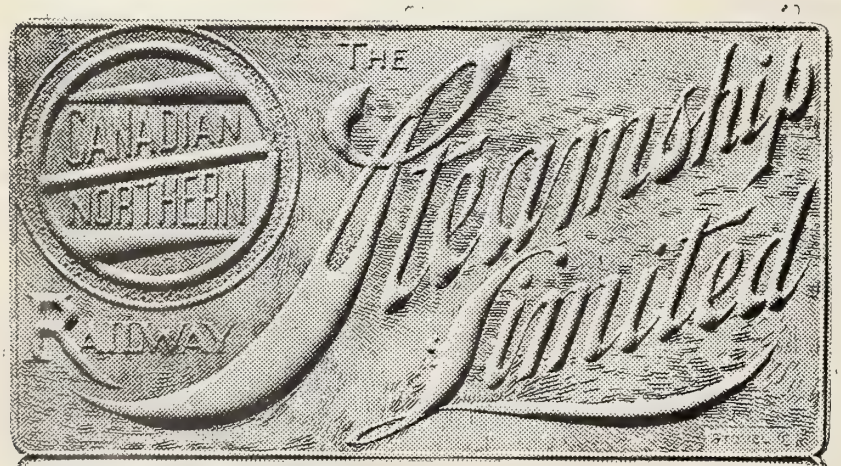
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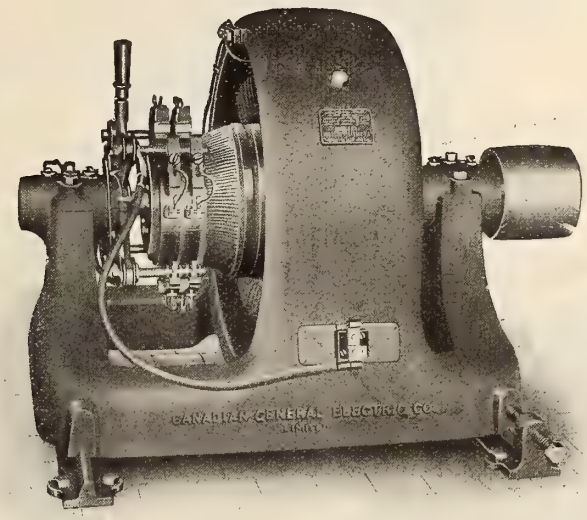
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OF ALL KINDS FOR

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HART CORUNDUM WHEEL CO.

(THE OLD RELIABLE) LIMITED

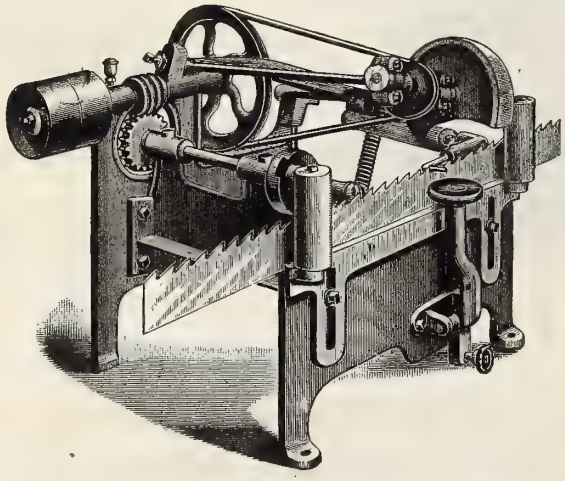
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OUR SPECIALTY—

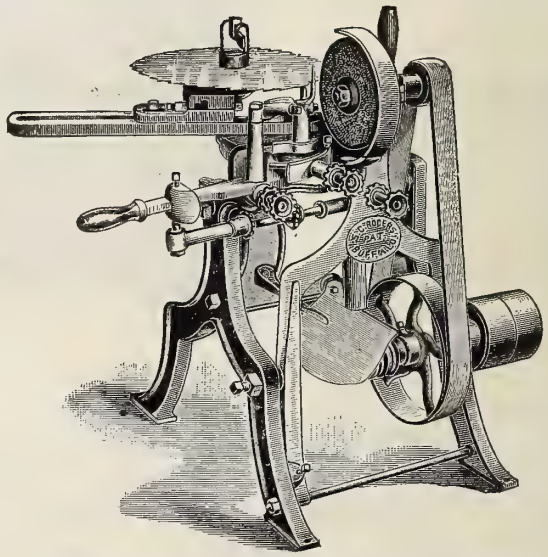
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Try our Corundum Wheels and you will never order another Emery Wheel.



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For saws up to 8 inches wide.



AUTOMATIC CIRCULAR SAW FILERS.
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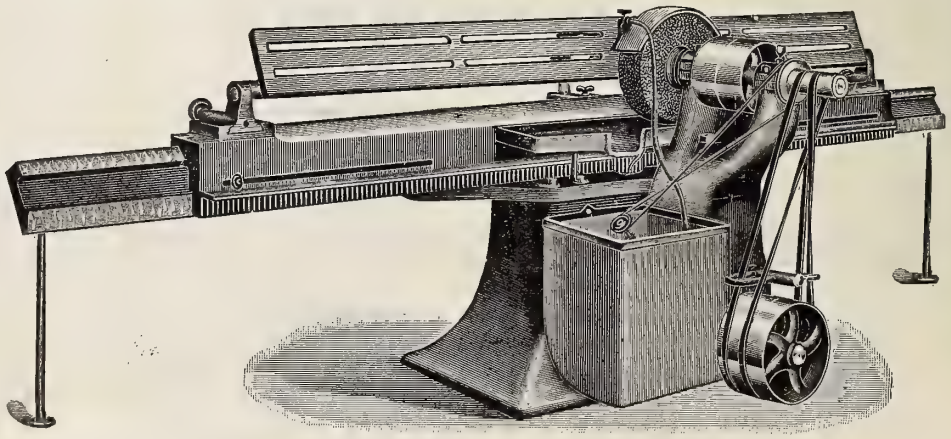
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To run either wet or dry.

The only machine made in Canada that will grind either a straight or concave bevel on a knife.

Made in four sizes for knives 1 in. to 120 in. long.



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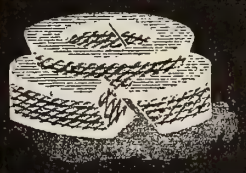
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We carry a large stock of all the STANDARD PACKINGS.

COLD WATER SWEATING PIPES are remedied by our SPECIAL COVERING.

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First in 1896, Foremost ever since.

Building Material and Machinery of all classes a specialty.

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—TO—
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Is the keynote of the XXth century commercialism, but in order to obtain it you must have our Office Labor Saving Systems which combined with industry will enable any person to climb the ladder of success. Others have done it, so can you. They can be used in any business. Try them and be convinced. Full line of Office Furniture and Supplies in stock.

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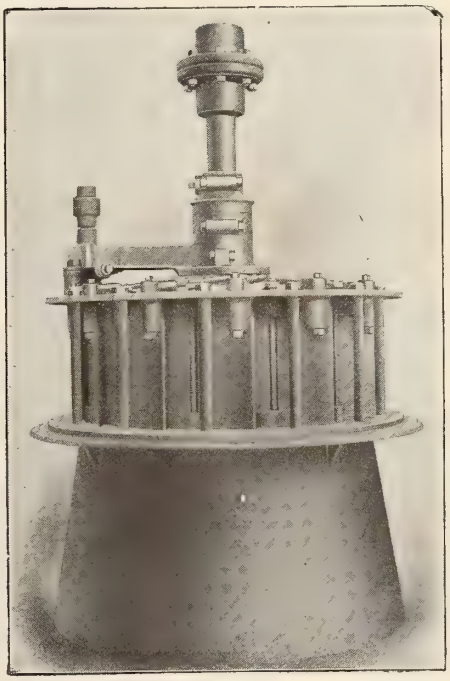
Turbine Perfection combines Speed, Power, Easy Regulation and High Efficiency.

In many turbines one of these results is sacrificed for the sake of obtaining the other three.

Not so with the **SAMSON,** which combines all four in a greater degree than any other wheel.

We guarantee greater power and speed, and easier regulation than can be obtained with any other water wheel operating under the same conditions. Further, we guarantee an efficiency of over 80%.

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Extract from a letter received from Vancouver correspondent of the COLONIST.

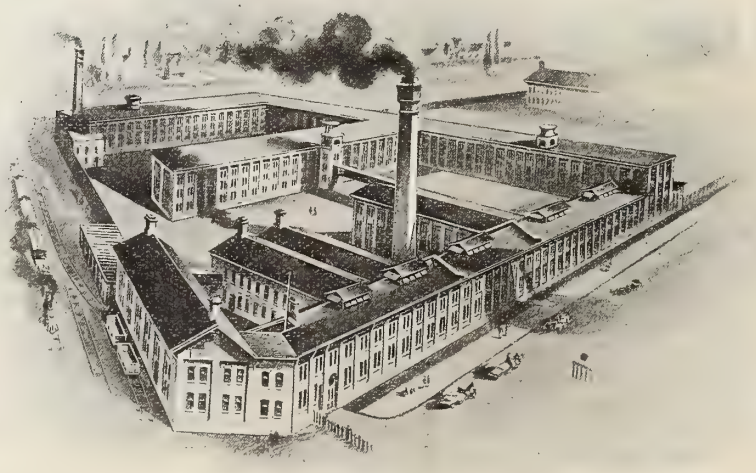
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BELTING
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SUPERIOR .. IN .. QUALITY



RUBBER HOSE
—FOR—
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Sole Manufacturers of the celebrated "MALTESE CROSS" and "LION" Brands Rubbers.
The best fitting, best wearing and most stylish rubber footwear on the market.

LION BRAND

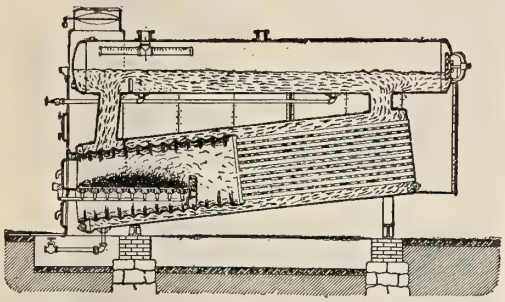
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Branches:—MONTREAL, WINNIPEG.

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Internal Furnace Saves 10 Per Cent.



An externally fired boiler wastes fuel because of the radiation of heat from the outside of the brick-work and the leakage of cold air above the fire, which causes a double loss by heating the excess of air and by producing imperfect combustion.

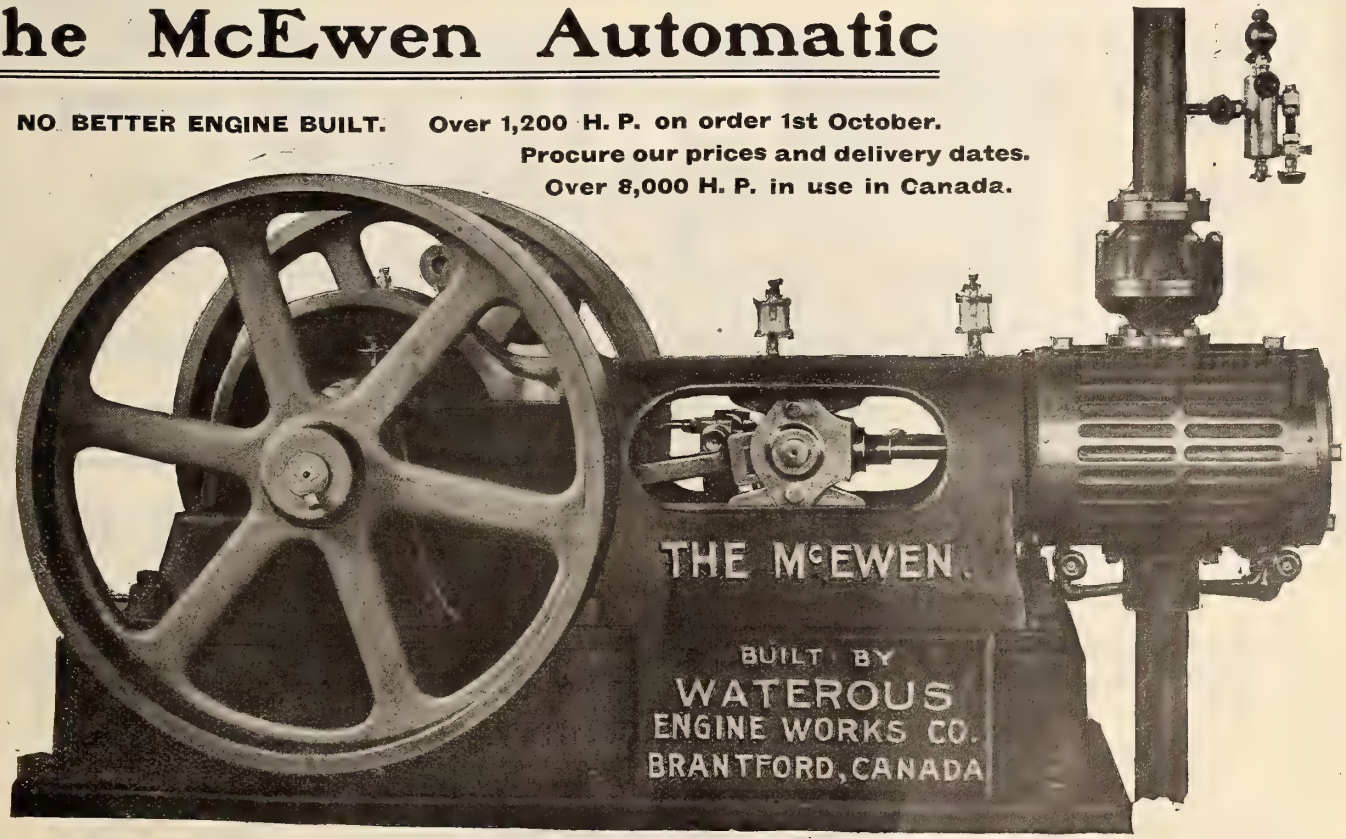
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Robb Engineering Co., Ltd. Amherst, N.S.

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The McEwen Automatic

NO BETTER ENGINE BUILT. **Over 1,200 H. P. on order 1st October.**
Procure our prices and delivery dates.
Over 8,000 H. P. in use in Canada.



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The Pride of the Paper Trade
This water-mark on each sheet

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FIRST—Our ability to supply anything you may not have in stock at short notice, or meet some little change desired, without much, if any extra expense.

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You don't have to spend time in trying to convince your trade that both our goods and we ourselves can be relied on—they are THE STANDARD. Some others you have to waste a lot of time over, and it all counts.

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MARINE ENGINES—Simple, Compound and Triple Expansion

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Horizontal Tubular Boilers and Tank Work a Specialty

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Pressed, Pieced, Japanned and Lithographed

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COPPER, SHEET IRON AND GALVANIZED WARES
OIL STOVES, TINNED SPOONS, LANTERNS,
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Catalogue on application to . . .

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GENERAL MILL SUPPLIES

MONTREAL — Cor. William & Seigneurs Sts.
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Head Office: TORONTO.

PHONE MAIN 3955. KING & YONGE STS.

—BRANCH OFFICES AT—

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London	1240	Brockville	105
Hamilton	97	Owen Sound	123
Kingston	45	Petrolea	22
Belleville	67	Port Hope	22
Berlin	180	Stratford	123

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Sample Rooms in Toronto, Winnipeg, Brandon and Vancouver

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Balmoral Block, 1902 Notre Dame St., MONTREAL

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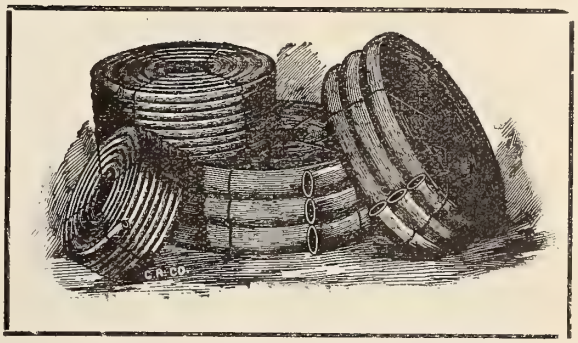
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British Consuls and Leading Chambers of Commerce the World over.

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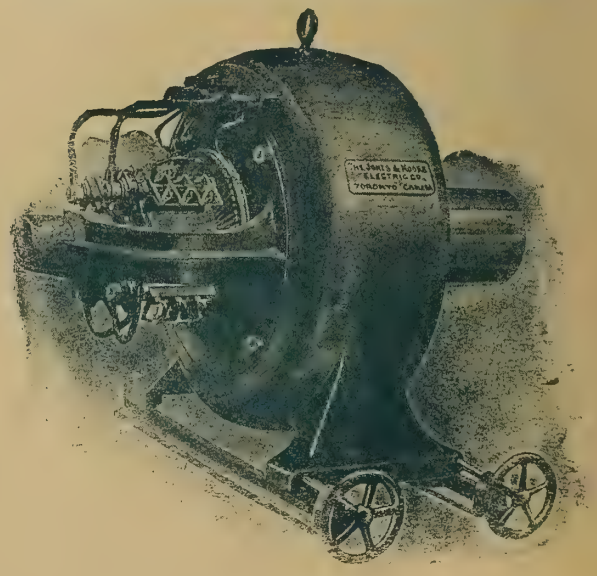
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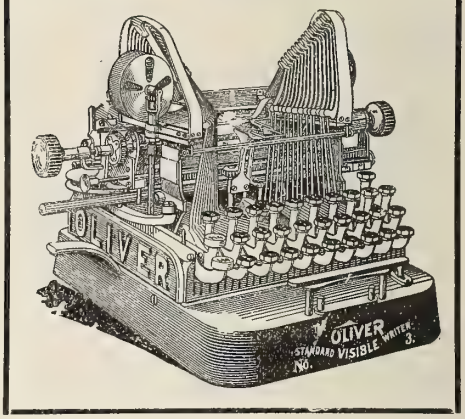
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THE CONVENTION OF 1904

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The Thirty-third Annual Convention of the Canadian Manufacturers' Association is now a part of history. Unquestionably it was one of the most important and enthusiastic meetings ever held in Canada, and to those who had the privilege of attending, its many interesting features will for years to come prove a source of happy and inspiring recollections. Measured by its characteristics, the meeting is one to be long remembered. Montreal threw its gates wide open, and from the welcome till the close, good fellowship and genial brotherhood held sway. Not a single word or incident marred the harmony of any session. On the contrary the spirit of unity and good-will was everywhere apparent. East and West clasped hands in the common theme of "Canada," and for three days directed their united strength in the consideration of Canadian questions with a zeal and an enthusiasm common only to business men whose interests are one with the growth and development of their country. Measured by its pleasant associations and entertainments, the convention was certainly the most delightful ever held by the Association.

The Montreal Branch provided a royal welcome, which never ceased to manifest itself in some form or other. The theatre party was enjoyed by all; the reception and sail, under the auspices of the Board of Harbor Commissioners was both interesting and pleasing; while the delightful afternoon spent at Mount Saint Bruno, and the hospitality of the host and hostess will never be forgotten.

Every organization and individual connected with the arrangements seemed to compete with every other in an unstinted effort to provide "a good time" for the visitors, and ensure the success of the convention.

Measured by its results, the convention will undoubtedly exercise a far-reaching influence in increasing the strength of the Association, in binding the Provinces more closely together, and in radiating from the Atlantic to the Pacific, and even across the seas, a splendid national and imperial sentiment.

The business sessions of the convention were model in their constitution and methods. All the important questions dealt with during the year, together with the action of the Association thereon, were presented by the various commitees in short, concise form, ready for discussion—and that discussion was carried on in admirable business-like fashion from first to last. How important these issues are, and with what care they are handled by this convention will scarcely be conceived. The annual address of the President is at once recognized as one of the most decisive and comprehensive utterances delivered within recent times in Canada, and is well worthy of the attention of Canadian business men, legislators and citizens generally.

At the annual banquet it was the pleasure of the Association to entertain a number of prominent representatives from Great Britain and the colonies, as well as the Right Honorable the Prime Minister of Canada, and many other noted figures in Canadian public life. Taken as a whole, the convention must be looked back upon with feelings of pleasure and satisfaction.

THE OPENING SESSION

On Tuesday evening, September 21st, after a day devoted to the interests of the various sections of the Association, the first business meeting of the convention was held in the Ladies' Ordinary of the Windsor Hotel, Mr. Geo. E. Drummond, President, occupying the chair.

After calling the meeting to order he said: We are very fortunate, indeed, in having with us to-night a gentleman whom those of us who know him in Montreal know to be, although a Scotchman born, a thorough Canadian, and one whose sympathies have always been extended to anything that will make for the uplifting of Canada, the Rev. Dr. Barclay, who has just returned from the Old Land. (Applause.) I am going to ask Dr. Barclay to invoke the Divine blessing on all the work of this convention, and I am going to ask you, ladies and gentlemen, to rise. (The audience rose.)

INVOCATION.

Rev. Dr. Barclay—Almighty and Eternal God, in whom we live and move and have our being. We bless Thee, that we are learning more and more to read Thy name and Thy nature, Thy presence and Thy providence in every changing aspect and in every unvarying law of Thy universe, on every page of history, in the witness of every noble life, and above all, in the face of Jesus Christ. We desire to acknowledge Thy power and Thy providence, and to ask Thy blessing. We ask Thy blessing upon our mighty Empire, beseeching Thee, who hast made us great, to make us equal to our high and holy trust, that we may be reverent in the use and enjoyment of our freedom, just in the exercise of power, generous in the protection of weakness. We ask Thy blessing on our King and Queen and all the members of the Royal family. May their hearts be filled with such loyalty to Thee that the people shall be exalted by their loyalty to Thee. We ask Thy blessing on our Dominion. It is a good land which the Lord our God hath given us. Many are our blessings and privileges. Grant us grace duly to appreciate and rightly to use these. Forbid that by our neglect or our abuse of them we should provoke Thee to take them from us.

We thank Thee for all the material blessings which we so richly enjoy. We thank Thee for the prosperity which has attended the labors of Thy people here. We thank Thee for the harvest which the hand of man, obedient to Thy laws, gathers from the surface of the ground, blessing Thee that when labor speaks to the earth the furrows of the field answer with an abundant return. We thank Thee for the safety that has attended those who go down to the sea in ships and do business across the great waters. We thank Thee for the treasures of the deep, and for the treasures hid in the earth, for the riches which our mining hand has gathered, the wealth we have quarried from our mountains or dug from the bosom of the ground, for all the riches with which nature has rewarded the laborious thought and the toilsome hand of man, for the waste places changed into granaries and gardens, and the desolate solitudes changed into cities of habitation. We thank Thee for those who have won for us our inheritance, for their patient endeavor and their valued endurance. We thank Thee for all the truths that science has discovered, for all the beauty that art has caught and preserved, for the freedom of our constitution, for our benevolent and philanthropic institutions, for all the truth that is taught in our churches, for the education of our schools and colleges, for all of the justice that has become the common law of our people, and for the righteousness and benevolence that bless our land. We thank Thee, O God, for everything that helps to teach us the greatness of our nature, the nearness of Thy presence, the certainty of Thy love. We bless Thee for those whose words have taught us, and whose life still teaches us wiser desires, purer and simpler manners, grander principles, loftier hopes, revealing to us the truly human, and thus leading us nearer and nearer to the Divine. Our prayer is that we may be enabled to keep and strengthen and enlarge the inheritance that has become ours. Forbid, O God, that we should sell our birthright, not to gratify self in the abundance of our riches, but to rejoice in them before God; to consecrate them, to perpetuate them, to transmit them unimpaired and hallowed to our children. In our daily work, in our buying and selling, may we keep our hands clean and our hearts pure. May we do justly, love mercy and walk humbly with our God; and when in Thy providence our cup runneth over, may we be bountiful to those who need our wealth, using our strength for the weakness of others, to lift up the fallen, to be eyes to the blind and feet to the lame, and to search out the cause that we know not.

We pray Thee, O God, that in all the departments of life in this Dominion, righteousness, which alone exalteth a nation, may rule. Especially do we pray that our merchants and manufacturers and trafficers may be the honorable of the earth; that our material progress and prosperity may be ever accompanied by philanthropy and piety. Do Thou make, we earnestly beseech Thee, this Association, with its members gathered from every Province of the Dominion and from ocean to ocean, a mighty instrument in Thy hands for accomplishing this glorious issue, and to Thy name in Christ be all the praise. Amen.

ADDRESSES OF WELCOME.

The President—Ladies and Gentlemen, I am sure you will all feel it is a very great pleasure, indeed, to have with us the chief magistrate of the city of Montreal. (Applause.) I do not know that we ever had a better mayor than Mayor Laporte—(applause)—and we have him with us to-night, and I am going to ask him to address you for a short time.

MAYOR LAPORTE.

Messrs. Chairman and Delegates of the Canadian Manufacturers' Association:

Allow me in my capacity of mayor of this city to greet you the most cordial and sincere welcome.

Your choice of our city to hold your thirty-third annual convention honors us, and is extremely agreeable to us.

Your Association distinguishes itself very particularly by the harmony which reigns amongst its members, notwith-

standing the diversity of interest of each. This harmony can only be the means of practical results and be profitable to every one in general, and you deserve to be heartily congratulated.

Your Association, I sincerely hope, will not limit itself to manufacturers' interests; the scope of your action must be wider.

Representing vast interests of all nature, you will, no doubt, study the important questions interesting the trade in general—transportation, tariffs, etc. The fire insurance problem would also be within the scope of your studies, for it interests the whole country, and more particularly Montreal.

We have had this year a good many conventions held in Montreal, but let me tell you, gentlemen, that none has surpassed yours in importance, for what would Montreal be without its manufacturers?

We, however, must say that our city occupies a geographical position second to none on this continent, placed as it is at the head of the oceanic navigation. Our port is not only the principal exporting point of the Dominion; it is also the principal distributing point of the greatest part of imported goods.

Our city is surrounded with powerful and numerous water-powers capable of supplying unlimited motive power. Our transportation by rail or water offers ample accommodation.

Montreal and its suburbs having nearly 400,000 population, a great part workingmen, offer to manufacturers the advantage of obtaining skilled labor with the greatest facility. Our workingmen are industrious, intelligent and experienced. Employers and employees agree together in the most cordial manner. They understand that it is in their interest and that of society to treat each other with justice, and that the progress and prosperity of our country depend largely on their good understanding and mutual sympathy. Strikes, I hope, will be soon an unknown thing here.

Our city council is doing all in its power to help and facilitate the operations of our manufactures by adopting as liberal measures and by-laws as possible.

In conclusion, please accept my best wishes for the success of your convention, and I thank you again for the honor of your visit; and if you should decide to choose Montreal as the permanent place to hold your future conventions, let me tell you that you are cordially and sincerely welcome.

MR. J. J. McGILL.

The President—I will now ask Mr. J. J. McGill, the Chairman of the Montreal Branch of the Association, to speak.

Mr. McGill (Montreal)—Mr. President and Members of the Canadian Manufacturers' Association,—On behalf of the Montreal Branch I bid you a most hearty welcome to our city. It is unfortunate that on the first day of your meeting here the weather should have been so unpleasant; but then that is made in Toronto, so we can't be blamed for that. (Laughter.)

I can assure you, gentlemen, we were exceedingly pleased when we learned that you had decided again to make Montreal the place of your annual meeting. We cannot forget the great pleasure and benefit we derived from your last meeting in this city. The masterly address of your then president was a revelation to Montreal manufacturers, who had no idea of the possibilities and scope of such an organization. As a result, a local membership of 116 at that time has increased to 310 to-day, and the Quebec Branch has been formed with an active organization and 65 members. Following this departure of holding the annual meeting away from home, came the memorable Halifax and Vancouver excursions, thus giving a course of practical education to the manufacturers and consumers from ocean to ocean.

It cannot be gainsaid, Mr. President, that this policy of our Association has been productive of inestimable benefit to its members. We have come to know one another, and made our Association something other than a name. Further, our varying our annual meetings at different centres gives many an opportunity of attending the sessions whose business engagements might prevent them from attendance if held at a distance. We, therefore, gentlemen, fully appreciate the sacrifice you have made in coming to us; and I assure you that it will be the earnest and hearty endeavor of the members of this Branch to do all in their power to make your stay with us enjoyable. The motto of "Canada for the Canadians" is familiar to all of us, although I would prefer Canadians for Canada and all that Canada produces. To-night we say, "Montreal for the Canadian Manufacturers' Association," and I trust that when you leave our city you will respond, "The Canadian Manufacturers' Association for Montreal." Gentlemen, I again welcome you, and may your visit be a pleasant and profitable one. (Applause.)



J. J. McGILL
Chairman Montreal Branch

MR. GEORGE REPLIES.

The president called upon Mr. W. K. George, of Toronto, to reply to the addresses of welcome.

Mr. W. K. George—Mr. Mayor, Mr. Chairman, Ladies and Gentlemen of Montreal,—To me has been deputed the pleasant task of acknowledging on behalf of your guests, the visiting members of the Canadian Manufacturers' Association, this your official welcome to the city of Montreal, and it differs not from what we expected. There is that same genuine ring of true hospitality, warm and wholehearted, which we have aforetime experienced at your hands, and it is with pleasure that we again find ourselves in annual convention here assembled.

HISTORIC MONTREAL.

Speaking for those of your guests who had the good fortune to attend the former convention held in this city, I know that I voice the sentiments of each of them when I say that we have looked forward with happy anticipation to renewing the friendships which were made at that time. We consider it is not only a great pleasure, but a great privilege to be able to meet in this city, so rich in memories historic of our country's birth. A long way, it seems, to look in retrospect, nearly four centuries, almost one-fifth of the Christian era, since in the fall of 1535 Jacques Cartier, the Canadian Columbus, sailed up what must, on account of its very magnificence, to him have been an awe-inspiring stream, as yet unknown and unnamed, but named by him St. Lawrence in honor of the saint on whose fete day he first entered its channel; and history also tells us that as he sailed on he came to where this river was in confluence joined by another mighty stream. And there he looked upon a scene which was beautiful, and a mountain which he named "Royal"; so I think that this ground can justly claim to be sacred to the earliest memories of our land. It is, as I said, a far look back, and the mind is filled with historic recollections which time alone prevents my dwelling on. To-night we look back into the dim past, illumined by the lives of those early explorers, of Jacques Cartier, of Champlain or of Maisonneuve, the latter about one hundred years later having established a missionary settlement on the present site of this city, the colony of Ville Marie.



GEO. E. DRUMMOND
President Canadian Manufacturers' Association, 1903-1904

THE CROSS AND THE FLEUR DE LIS.

And just here let me remind you, in this city, so rich in magnificent churches, that there is one thing for which we should be devoutly thankful, and that is, that in the footsteps of the early explorers the cross and the fleur-de-lis were always planted side by side, and from that day to this, Christianity has been, as we trust it ever shall be, a vital and beneficent influence in the life of our country. Let us ever hold in fond reverence the recollection of those noble priests and saintly nuns who sacrificed all that worldly life holds dear in order that they might aid in establishing Christianity in the new land. Try and picture in your mind the difference between then and now. Maisonneuve's altar erected under the forest trees, close to where at present stands the mighty "Notre Dame." And how brave and strong those early pioneers! You all remember reading how the priest at that first service said: "You are a grain of mustard seed that shall arise and grow until its branches shall overshadow the earth. 'You are but few, but your work is of God. His smile is upon you, and your children shall fill the land.'" How well that prophecy has been fulfilled! Consider the changes that have taken place. Think of your magnificent city, its great buildings, its immense commerce, its culture and its wealth. Its means of transportation, railways extending from coast to coast, and mighty steamships at your doors, both equipped with every modern luxury and convenience, and then contrast them with the frail craft in which your predecessors reached these shores—craft which, from their very frailty, had to hug the banks to avoid the dangers of wind and wave, and in doing so exposed themselves to the danger of attack from the savages lurking in ambush near. Those were strenuous days, filled with toil and danger, different far from the comfort and luxury of the present time, and to those early explorers all honor should be given.

THE ASSOCIATION BROADLY REPRESENTATIVE.

Ladies and gentlemen, we have again assembled here for the purpose of deliberating on questions of great moment in the development of our country. We are believers in the proverb that "In a multitude of councillors there is wisdom." We will have representatives from every section of our grand Dominion, and we trust that our judgments and recommendations will be as broad and as patriotic as is our representation. Our Association is powerful and increasing in importance. When we met here three years ago we had a membership of 800. Since that time it has grown to more than 1,500, and is representative of every district in our broad land. I am a great believer in the benefits to the country in the holding of our conventions in the different centres. There is nothing that will so effectually obliterate sectionalism and generate patriotism as learning to know your country by personal observation. There is nothing that will so tend to strengthen the "tie that binds" as learning to know and esteem your fellow Canadians in the different sections of our land. Honest and good-hearted rivalry we want—that means progress; but sectionalism, which narrows the life, retards the growth of our country, we abhor. I know that I walk your streets with a more exultant tread when I look around and see this magnificent city, and I say to myself: "This is Canada; this is a sample of what our people are capable of doing." We are all enthusiastic Canadians, believers in our country. We know that we have the most magnificent possibilities within our borders, and we want to do our part in building up this land, this Canada of ours, into a great and a prosperous nation, a worthy member of that galaxy of free States which form the British Empire. Surely it is an inspiration to feel that we can take part in that work.

"Our heritage is hope. We'll rear
A nation worthy of the land;
And when in age we linger late
Upon the heights above life's vale,
Before we, like the mists, shall merge
In depths of God's eternity,
We'll see, perchance, our influence
Left dew-like, working for the good
Of those whose day but dawns below."

Ladies and gentlemen, once again I thank you most sincerely on behalf of your guests for the very warm welcome you have given us in the city of Montreal. (Prolonged applause.)

President Drummond then delivered the annual address as follows:

PRESIDENT'S ANNUAL ADDRESS

Gentlemen of the Canadian Manufacturers' Association:

It is with feelings of more than ordinary pleasure that as your President, I am privileged to-night not only to welcome you to the important conferences and work of your Thirty-third Annual Convention, but that I am able to do so within the gates of my own home city—Montreal. I may be permitted a certain amount of pardonable pride in the city of my adoption, so rich in trade memories of the past, and I hope I shall be excused if I tell you that the history of this, the commercial metropolis of the Dominion, is practically the history of our common country.

MONTREAL'S WELCOME.

Two hundred and fifty years ago Montreal won her commercial spurs, and during that long period Montreal has borne a prominent share in the great country that we call our own.

In the early days of the old régime, and before the little colony had grown sufficiently strong to penetrate far into the interior, Tadousac, Quebec, and Three Rivers were the chosen headquarters of trade, but the position of Montreal situated as she is at the head of ocean navigation, appealed to the far-seeing, commercially inclined sons of old France, and Montreal soon became the headquarters of a trade which controlled the whole of the vast territories beyond. Hither came to the great Annual Fair hosts of red Indians from the Upper Lakes, their canoes laden to the water with beaver skins, the principal article of barter in those days, and also to the gathering came merchants from Quebec and Three Rivers to exchange their imported and probably, to a moderate extent, locally manufactured goods, for other commodities, and it was here that the imagination of La Salle took fire and led him to prosecute, largely for trade purposes, the exploration which finally resulted in the discovery of the Mississippi. Montreal was also the point of departure of another of the earliest and most successful of Canada's commercial travellers, Louis Verendrye, the first white man who gazed upon the awful and seemingly impassable barrier of the Rocky Mountains, and the instinct to regard Montreal as the natural vantage point of trade was so great, that it even tempted Perrot, the Governor of Montreal, to incur the grave displeasure of Frontenac, his superior, by establishing himself at the island near Lachine, which island still bears his name, for the purpose of intercepting the fur traders on their way to Quebec.

"There is a tide in the affairs of men which, taken at the flood, leads on to fortune," and John Jacob Astor must have recognized Montreal as the "flood" of his "tide" when he chose this city as the starting point for the troops of voyageurs he despatched to the far West in search of the beaver skins, which turned out for him a veritable "golden fleece."

Later on a further stimulus was given to the commerce of the country by the addition to Montreal's population of hundreds of American business-seeking men, as well as of our own nearer kindred of the British Isles, so it is not surprising that Montreal, blessed with so many component parts of the finest commercial blood in the world, should have gone on and prospered. But Montreal could not remain satisfied with her own individual progress. She sought the advancement and development of other parts of the country, and never in the history of this city has there been a time when Montreal did not only wish God-speed to the scattered towns and cities of the Canada in which we live, but also strove in every legitimate way to further the well-doing of her younger sisters. Such sympathy, such union, is strength, and when later days developed the men who possessed the courage and foresight which led to the building of the great Trans-Continental system of the Canadian Pacific Railway, we felt that our natural aspirations had been fully realized, and that at last we had been welded together into a strong homogeneous Canadian people.

It is for these reasons and because it is occasionally well for us to look back to the beginning of things, that I take a peculiar pride in welcoming you to Montreal, once the old trading post, now the financial and commercial metropolis of the Dominion.

THE PAST YEAR.

The year that has passed since we last met in the City of Toronto has been, thank God, a year of comparative peace in so far as the British Empire is concerned. As a people we have much to be thankful for, and notably, I think, for the distinct and remarkable advance in public opinion favorable to Imperial unity in trade, commerce, mutual appreciation and sympathy which the year has brought about.

The question of the reorganization of the Empire and the consolidation of Imperial interests has become a live issue that bids fair to be settled satisfactorily, and in a manner that will make for the permanent federation of the British people the world over.

Outside of the Empire the year's event of first importance has been, and is, the war between Russia and Japan. It means the awakening of the East, the ultimate result of which, in the light of recent events, no one can venture to foretell. The Japanese nation has given the world an illustration of the wonderful effects of mental and physical training. If thirty years have effected so much in these Eastern people what will the next century do, and if a ruler of forty millions of Japanese people has accomplished so much in so short a period, what might the ruler of four hundred millions of Chinese subjects accomplish? Discount their ability in comparison with that of the inhabitants of Europe and America as we may, we cannot afford to ignore the utilization of that vast store of energy, brains and determination. The great carrying trade is to-day concentrated largely on the Atlantic—the present war is undoubtedly hastening the construction of a vaster traffic upon the Pacific.

If we Canadians are to look forward to commercial supremacy we must read the signs of the times; in other

words, we must be up and doing, and we must in our forward movement recognize among other duties our national and Imperial obligation in respect to the naval protection of our commerce both on the Pacific and on the Atlantic.

The advance that Canada has made in trade, commerce, and general prosperity since the opening days of this twentieth century forces upon us the conviction that the "flood" of our "tide" as a people has come, and that we are on the threshold of a future full of great possibilities for this Dominion. Upon our Government and people must naturally rest grave responsibilities as to the measures and methods that are now taken to secure a full measure of the prosperity and greatness which the coming century should bring to Canada. That the world is awake to the future of this country is shown by the steadily increasing influx of immigrants which are coming to us from all lands, and more particularly from Great Britain and the United States. In the year ending June, 1903, 128,364 immigrants arrived here, these figures being double those of the preceding year. The returns for the year ending June, 1904, are subject to revision, but in round numbers 132,000 immigrants reached our shores in that period. These people must be permanently absorbed into the activities of Canadian life, and we must take measures that will ensure this.

CANADA'S GROWTH.

In considering the course that we must adopt in this nation building of ours, one of the first questions to which we must give thought is the importance of establishing, preserving and developing manufacturing industries in Canada.

The source of a nation's wealth is the work it does and the things it creates. Trade follows production. If we make, we are prosperous; if we don't make, we lose ground in every department of national life, and individually and collectively become impoverished. The great fabric of commerce is all woven together on the warp of production.

Now, there is no territory in the civilized world more richly endowed and better adapted by nature to the production of wealth, and to the founding of a great and prosperous nation of workers, than that embodied within the bounds of the Dominion of Canada. Our vast areas of arable lands, and our wealth of mine, forest, and fisheries, offer a wide and profitable field for intelligent human effort; and fortunately, too, the varied character of our natural wealth affords a solid basis for the establishment and successful operation of diversified industries within the borders of the Dominion. No civilized nation ever has been or ever can be prosperous and great without diversified industries that will afford congenial employment to people of varying tastes and capacities. The more numerous the industries are, the greater the prosperity of the nation will be.

Through much difficulty, consequent in part upon the necessity of carrying on business over a wide and sparsely populated territory, shut out by hostile tariffs from other markets, and unduly exposed at home to the keenest opposition from the longer established and more highly developed and specialized industries of older and more densely settled countries, our Canadian manufacturing enterprises have yet lived through the initial stages of existence, and to-day form, conjointly with our vast agricultural interests, the means by which our people gain their livelihood, and through which we hope to establish and maintain here a great, prosperous and progressive nation.

OUR MANUFACTURING INDUSTRIES.

Let us as briefly as possible take stock of the position that our Canadian manufacturing interests occupy to-day.

In the first place, I think we are well within the mark when we estimate that we have now not less than $520,000,000 of capital invested in manufacturing in Canada. In 1881 there were $159,000,000 so invested. Thus, in twenty years we have, in the face of many difficulties, increased our capital investment by $361,000.000.

I have been favored with some particulars in regard to the 1901 census of the Canadian manufacturing industries, and in those statistics I find that we have much cause for congratulation.

The total production of the 14,650 Canadian factories in 1901 is estimated at $481,053,375. To produce this amount of goods there were 344,095 workpeople and clerks employed, to whom were paid $113,283,146 in wages and salaries. The amount of raw material consumed to produce this $481,053,375 worth of finished goods was $266,527,858, showing a net profit to the country of $214,525,517. In estimating these figures it must be borne in mind that only factories employing five hands or over were included in the census statistics, so that it is not correct to measure our advance by comparison with the figures of the 1891 census, which only credited us with a less number of factories by 585 than we have in the census of ten years later.

In comparing the importance of manufacturing with other great interests, we have much reason to be pleased with our achievements. The total combined value of the production of the agricultural, dairying, mineral, forest and fisheries industries was $511,666,306, or only about $30,000,000 in excess of the value of the manufactured goods produced in Canadian factories employing five hands and over. I make this comparison not to belittle our basic industries, but rather to remove the idea even yet existing in the minds of some people that the manufacturing industries are of secondary importance. Even omitting the important fact that they provide a home market for the materials of our basic industries, and without taking into consideration at all the value of the Canadian raw materials used, the factories dealt with in the census returns enabled us to keep in this country a sheer sum of $214,525,517.

A SOURCE OF WEALTH.

A still more correct idea of the present relative importance of our manufacturing industries can be arrived at if we follow the plan adopted in the census of 1891, and include for 1901 the value of the products of establishments employing less than five hands. With respect to this I am indebted to my friend, Mr. Archibald Blue, the Commissioner in charge of the census returns of 1901, for the following interesting data, namely:

"The number of all industrial establishments enumerated in the census of 1891 was 75,964, and the value of their products $469,907,886. An analysis of the returns made for the purpose of comparison with the industrial census of 1901 shows that the number employing five hands and over was 14,065, and the value of their products $368,696,723. The number of establishments employing *less* than five hands in 1891 was, therefore, 61,899, and the value of their products $101,211,163, or 27.45 per cent. of the value of the products of establishments employing five hands and over. Computed on the same ratio, the value of products of establishments employing less than five hands in the 1901 census year would be $132,050,000, and the value of the products of all the industrial establishments in that year would be $613,103,375, being the enumerated value of $481,053,375 for establishments employing five hands and over, plus the estimated value of $132,050,000 for establishments employing less than five hands."

On this basis, which, I think, you will agree with me is the correct one, we find that the product of our manufacturing industries in the census year 1901 exceeded in value by nearly $110,000,000 the value of the total combined pro-

duction of our agricultural, dairying, mineral, forest, and fisheries industries.

Then there is another comparison that can be drawn. I find that in wages for agricultural work the sum of $24,228,515 is paid out as against $113,283,146 in industrial wages and salaries. While the former figures omit the wages of the farmer and the latter that of owners and firm members, and even though the former may be somewhat greater than the latter, the fact remains that the industrial wages are several times greater than the agricultural wages. The point I wish to make is that nature does much work for the farmer, the equivalent of which, in the case of the manufacturer, can only be accomplished by the employment of human labor.

As the Census Commissioner well says: "Man plows the land and sows the seed, or gives fodder to his domestic animals. It is nature that causes the seed to germinate and grow and ripen into harvest, and that changes the fodder into muscle and flesh and wool. The workman at the bench, the forge or loom quits his labor for the day, and the process of manufacture is suspended until the man comes back to his shop or factory next morning. The farmer leaves his fields or his stables in the evening and returns to them in the morning to discover by signs on every side that nature has been toiling for him all night."

Even in the manufacture of food products I find that each hand produces 2.79 times as much as each hand in the textile and clothing industry, 2.09 times as much as each hand in the iron and steel industry, and 1.8 times as much as each hand in the miscellaneous industries. This greater employment of labor by our general industries is a point worthy of the serious consideration of every Canadian, and I commend it particularly to the attention of our farmers.

VALUE OF THE HOME MARKET.

As a nation of producers our first thought must naturally be the profitable marketing of our products. There is one market that we can safely take, mould, and control for the upbuilding of Canadian interests—I refer to the home market. Our statesmen even the greatest among them, have limits to their power, but at any rate they can legislate to conserve our home market to the people of this country, and to prevent foreign producers depriving us of our power of self-help.

Foreign markets, however desirable, never equal in any permanent sense the value of the home market, for, so far as the foreign markets are concerned, we know from past experience that we are always liable to be legislated out of business. The home market is the more remunerative to our people because the products of the farm, mine, and forest naturally yield a higher degree of profit to the individual producer when marketed in close proximity to the place of production.

To establish native industries that will create and maintain a prosperous people, and that will thus provide a home market, should be the object and aim of our statesmen and of our farmers and manufacturers alike.

INDUSTRIES MAKE MARKETS.

The successful establishment of an important industry in any Canadian centre, for instance, secures to the farmer, miner, and other producers—when their interests and those of the industries are properly safeguarded by an efficient Customs tariff—not only the home market created by the needs of the workpeople directly employed, but the market afforded for the sale of raw material to the factory, and in addition the ranks of the workpeople consumers are augmented by the doctors, notaries, clergymen, teachers, shoemakers, tailors, carpenters, masons, plasterers, painters, cabinet makers, wheelwrights, carriage and harness makers, store-keepers, butchers, bakers, policemen, firemen, and the hundred and one other workers who go to make up the necessary and useful members of any community.

All over the country, in Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, the North-West Territories, and British Columbia, we have just such communities, whose very existence depends upon the safety and success of the industrial enterprises established in their midst. Allow these Canadian industries and communities to be crushed out by foreign and antagonistic competitors, and you destroy, for instance, the farmers' immediate and most profitable market. You leave on his hands a surplus of farm products, often of a perishable nature, for which, shut out from the American and other markets, he cannot find sale. In addition to this you injuriously affect the transportation, financial, and every other interest in this country.

Any legislative measure that will keep our capital and labor continuously and profitably employed will, I am sure, command the hearty support of all intelligent Canadians, whether they be agriculturists or manufacturers, producers or consumers.



RICHARD A. DONALD
Chairman Toronto Branch

OUR IMPORTATIONS.

The trade and navigation returns for the year 1904 are ample proof of the need of radical changes in the present Canadian Customs tariff. On the basis of goods entered for consumption and exports of domestic produce, the increase in Canadian trade for the past year was $2,788,611, which is a small increase compared with those of the years immediately preceding. A further analysis brings to light the fact that the domestic exports show a shrinkage of $15,987,235. This decrease is accompanied, first, by an increase of $1,813,152 in the export of foreign produce; and secondly, by an increase of $18,775,896 in the importation of goods for consumption; in other words, while our total trade statistics have not altered materially, the balance of trade has turned against us in one year to the extent of $34,763,131. That fact explains the liquidation of woolen mills, the four thousand silent cotton looms, the transformation of shirt manufacturers into shirt importers, and it is a striking statistical accompaniment to your need of business during the first six months of the present year. What further do we find? In 1903 our importations from the United States amounted in value to about $129,000,000.

This year they have increased to $143,010,578, excluding bullion, an increase of more than $14,000,000, or about 10 per cent. Of this increase over $8,850,000 was dutiable goods, so that the main feature of our trade during this past year has been the growth of importations from the United States, and the main feature of these imports is that they are to a large extent in goods that could be made in Canada. The amount of dutiable goods imported under the general tariff from the United States in the year ending June, 1904, was $77,390,807. That, in short, represents the value of the Canadian harvest reaped last year by the United States—a country that will not admit our goods on anything like reasonable terms. Nevertheless, we must admire the strong, consistent national policy pursued by the United States in conserving her own interests.

In 1903 over 38 per cent. of that country's imports consisted of crude products, which are raw material for their industries. In Canada only some 20 per cent. of the imports is in the form of raw material, and that in spite of the fact that we must import our cotton, anthracite coal, and so forth, which the United States produces at home. The United States importation of articles wholly or partially manufactured, and articles of voluntary use, which are largely manufactured goods, comprises 40 per cent. of their importations, whilst similar goods in Canada made up 66½ per cent. of our importations.

MAKE THE GOODS AT HOME.

Can we not produce more in Canada, and what would that production mean to this country?

Our importations of dutiable goods this year have been to a value of about $149,000,000. Statistical returns are not yet to hand to enable us to fully analyze the goods actually covered by this amount, but as a guide we know that our importation of wholly or partially manufactured goods last year was $149,600,000. With these figures before you I believe you will agree with me that with a properly constructed tariff, admitting raw material at a low rate of duty, and with proper protection upon the finished article, we could easily increase our output of manufactures by $60,000,000.

According to the census returns, 344,095 operatives produce $481,053,375 worth of goods, and the manufacture of $60,000,000 of goods will employ 42,900 workpeople—yes, even more, for we shall be making the more highly finished class of goods, which require more labor than many of the lines now manufactured. The employment of 43,000 people will build another city equal in population, if not in wealth, to that of Toronto, and it will consume upwards of $20,000,000 worth of farm products annually. Surely here is a policy worthy of the support of a patriotic Government and people!

CANADA'S TARIFF.

Now, let us consider the Canadian Customs tariff and our trade relations.

With respect to our present Customs tariff, the Canadian Manufacturers' Association occupies exactly the same position to-day as when we met at Halifax two years ago and adopted the following resolution, namely:

"Resolved, That in the opinion of this Association the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries;

"That, in any such revision the interests of all sections of the community, whether of agriculture, mining, fishing or manufacturing, should be fully considered, with a view not only to the preservation, but to the further development of all these great natural industries;

"That while such a tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection to all Canadian producers."

As I have said on a former occasion, "the two great and practically the only markets available for Canadian products to-day are, firstly, the home market; and secondly, Great Britain, the Mother Country." What I may call our "Halifax policy," therefore, has a double purpose, viz., to conserve as much as possible these two markets to the Canadian people, and in the case of the British market, to transfer orders for our surplus requirements to our own customers, the people of the Mother Country.

I repeat what I said at Toronto in November last, viz.: "Our first duty unquestionably is to our own Canadian people. The best we have to give must be conferred upon those who live within the borders of the Dominion, who labor in our workshops, on our farms, in our mines and forests, on our railroads, who carry on the work of the country generally, and who pay the necessary taxes for the administration of the affairs of this country. We must all realize as a prime factor in this great question that we cannot afford to lower the standard of living in Canada. Labor must be as well paid here as in the neighboring Republic, or our people will continue as in the past to cross the border in search of better things. If, however, we do pay the same wages as those paid in the United States, then, naturally, we must protect the products of our workmen as efficiently as the United States protects the products of American workmen; and it is obvious also that in entering into mutual preferential arrangements with the United Kingdom we must reasonably safeguard our Canadian workmen and employers against the lower wages and lower standard of living at present ruling in Great Britain."

REVISION NECESSARY.

The full and careful revision of our present Customs tariff, which we have consistently pressed for during the past two years, and which we are convinced is so vitally necessary in the best interests of this country, has not yet been undertaken by the Dominion Government. We cannot but deplore the delay, because it has meant in the interim, and it means to-day, a very serious and continued loss to the industries, and we believe to the general interests of Canada. We recognize that signs are not wanting to show that the Government realize that we are right in our contentions, this being indicated by the highly commendable action of the Government in respect to steel rails, and by other very necessary changes recently made, and which are in the right direction. In so far as these changes are helpful to the particular Canadian industries dealt with they must have the cordial recognition and approval of this Association, but nevertheless we stand for a full revision of the tariff as being absolutely necessary to the welfare of all the industries and interests of this country.

TRADE WITH THE EMPIRE

With regard to the question of preferential trade between the United Kingdom and her colonies, we have placed ourselves unreservedly on record as favorable to a tariff arrangement that, while encouraging the development of industries in Canada will nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged.

A preferential arrangement giving Canadians an advantage in the markets of Great Britain will be immensely to

the interest of our agriculturists. Moreover, it will be to the advantage of our national and Imperial interests in that it will make the Dominion of Canada more attractive than ever to desirable immigrants from Great Britain and elsewhere.

For these reasons, if for nothing else, the policy must command our earnest support, yet the motive that has above everything influenced us in endorsing the policy has been an earnest desire for the union of the British race, for the firm and effective federation of our people in all quarters of the globe.

As business men we are all, I am sure, agreed that the best, safest, and surest way to effect a permanent consolidation of Imperial interests is through the medium of a mutual arrangement by which each section of the Empire will grant to the products of the other a preference as against the products of foreign labor. It seems to me that nothing should now stand in the way of the British and Colonial Governments drawing together and appointing fully qualified representatives to investigate this great question thoroughly, and to endeavor to evolve a policy of preferential trade that will bind the United Kingdom and her colonies together in a permanent alliance. There is no reason to fear but that such a conference would bring about an effective, well-considered mutual arrangement by which, while local interests in the United Kingdom and in the colonies can be fully and equitably safeguarded and kept prosperous, yet at the same time a very large trade that now goes to foreign and commercially antagonistic capital and labor can be diverted to our own people within the Empire.

As an evidence of what preferential trade as between Canada and some of her sister colonies has accomplished, I desire to draw your attention to our present trade in West Indian sugar. With the West Indian sugars shut out of the United States market through the fact that Porto Rican sugars are admitted free, and that Cuban sugars are admitted to the United States at a preferential rate, the Canadian preference has virtually proved the salvation of the West Indian sugar industry. As a result we learn now from private sources that the Trinidad authorities have asked permission from the Imperial Government to negotiate a reciprocity treaty with Canada. I am convinced that it has not injured us to accord this treatment to our fellow-colonists, and I am also confident that it will be an important benefit to us to secure a preference upon our food stuffs and manufactures in these markets.

In the fiscal year ending 30th June, 1904, the importations into Canada of sugar from the West Indies and British Guiana reached a value of $5,236,451, and represented about 140,000 tons out of a total consumption of 180,000 tons. In 1902, before the German surtax was imposed, we only imported from the West Indies and British Guiana combined to a value of $907,533. An increase of 377 per cent. in so short a period demonstrates clearly what a substantial tariff with a substantial preference will do for Imperial trade.

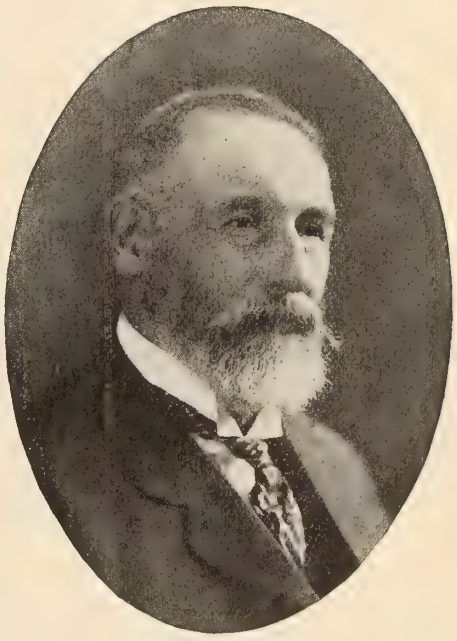
NEWFOUNDLAND.

In giving consideration to the development of trade with our sister colonies, special attention should, I think, be given at once to our relations with our sister colony, Newfoundland. I think I voice the sentiment of the members of the Canadian Manufacturers' Association when I urge that our Government should take steps to offer Newfoundland such a fair and reasonable arrangement that the oldest of all the British colonies shall be induced to join this great Dominion. I cannot help believing but that this will be in the interest both of Newfoundland and of Canada, and in respect to ourselves particularly should it be advantageous to our Maritime Provinces. It seems to me that we cannot afford to sit idly by while the trade of that great island, Newfoundland, goes in yearly increasing quantities to the United States. In 1893 Newfoundland's imports from Canada amounted in value to $2,886,901, while her imports from the United States were valued at $1,665,227. In 1903 the relative positions were reversed: the imports from Canada had declined to $2,869,897, while the imports from the United States advanced to $2,920,914, an increase of over 75 per cent. The great natural resources of Newfoundland are beginning to be developed, its trade is rapidly expanding, and every year that passes makes it more apparent that its entry into the Dominion would add greatly to Canada's power and prestige as a nation.

Closer trade relations with the British West Indies should occupy (in the interest of Canada, and particularly of the Maritime Provinces) the constant attention of our Government.

THE UNITED STATES.

Years of rebuff at Washington have at least taught the Canadian people self-reliance in matters pertaining to trade



R. H. ALEXANDER
Chairman British Columbia Branch

and commerce, and there can now be no looking to Washington so far as the members of this Association, and for that matter any staunch Canadian is concerned. A comparison of our present tariff with that of the United States will show what an unjust and unreasonable position governs the exchange of commodities between the two countries. In the fiscal year 1903 Canadians bought in merchandise from the United States thirty-four times as much per head of population as our American friends bought from us; and with respect to farm products, our position was equally bad, each Canadian buying twenty-nine times as much United States farm products as each American did of Canadian farm products of the same kind. We must all therefore, surely appreciate the fact that under our present tariff the United States is rapidly and surely absorbing our wealth. We ask that our Canadian Customs tariff be revised, and the duties made higher and more effective, so as not only to change the unfair conditions now existing between ourselves and our good neighbors in trade matters, but to encourage and develop to the fullest possible extent our own native industries and pursuits.

"Imitation is the sincerest flattery," and our friends to the South (for whom, as a people, we entertain the warmest feelings of regard) cannot surely with any fairness object to our adopting the masterly policy that they themselves have consistently followed for the last forty years, and which has brought about within their borders a development that has been the wonder of the civilized world.

Some of our American friends have recently urged upon their Government the importance of negotiating a treaty of reciprocity with Canada, urging the great importance of the Dominion as a convenient, ready, and profitable market for the sale of American manufactured goods, and pointing out that immediate action is necessary if Canada is to be prevented from entering into a preferential arrangement with the Mother Country. I have no doubt that the gentlemen of the Boards of Trade of Boston, Detroit, and elsewhere have the most neighborly feelings towards Canada when they press for reciprocity, but "business is business," and Canadians have learned from past rebuffs that it is well for a nation to be self-reliant, even in the matter of industrial pursuits and markets. We Canadians, therefore, purpose giving our national industrial enterprises an opportunity to develop and become strong under more favorable tariff conditions than have hitherto existed before we shall undertake to discuss the question of either restricted or unrestricted reciprocity in respect to the industries and pursuits by which, and through which, our people at present gain their livelihood.

FAST ATLANTIC STEAMSHIPS.

With the object of uniting more firmly this Dominion of Canada with the Mother Country I am absolutely convinced that one of the strongest and most necessary links in the Imperial chain would be the establishment of a fast line of steamships between Canada and Great Britain, and that immediate steps towards the accomplishment of such a measure should be taken by the Government of this country. Such a service would further be of great advantage to our export and import trade, especially in perishable products, and in connection with our transcontinental railways it would induce a large amount of tourist travel in addition to considerable regular passenger traffic.

CANADIAN HARBORS.

In the development of Canada we cannot give too great consideration and support to reasonable measures making for the utilization and upbuilding of our Canadian harbors on the Atlantic seaboard and in the St. Lawrence. These magnificent harbors are not only nearer to Europe than any other seaports of America, but are also very favorably situated for trade with the British West Indies, Africa and South America. Wherever possible Canadian shippers should direct their foreign shipments via Canadian harbors.

RAILWAYS.

Railways are the "sine qua non" of expansion in any new country. In mileage of railways and excellence of equipment Canada ranks very high indeed, but with the inpouring of immigrants, especially to our great North-West, and with the general development that is going on throughout the length and breadth of the Dominion, it becomes imperative that Canadians (agriculturists and manufacturers especially) should unite together for increased and increasing transportation facilities that will serve to facilitate intercourse between our different Provinces, that will enable us to market our products, whether they be from the East or from the West, at the minimum of cost, and that will help us to meet and overcome foreign competition with our products, whether of the farm or the workshop. The members of this Association must view, therefore, with gratification the birth of another great Transcontinental road in the Grand Trunk Pacific.

THE ASSOCIATION.

While much of our thought is given to the discussion of these great trade issues, our interest to-night and for the next two days is centred in the great organization which has brought us together, and over whose councils I have had the honor to preside during the past year.

I think I can report to you with a pride universally shared by all the members that the Canadian Manufacturers' Association has just closed the greatest and most successful year in its history. Reorganized less than five years ago, with a membership of one hundred and thirty-two, it has by virtue of its usefulness increased to a membership of more than fifteen hundred, and is to-day without doubt the most powerful national organization in Canada. Five years of earnest work in solving the problems which must always confront manufacturers in a young country like our own, have proved that there are great fields of operation for such an Association, and that its services are almost indispensable to the manufacturers of Canada. I might go farther and speak of its national influence in welding together the scattered Provinces of the Dominion, and in creating and fostering that true patriotic sentiment which has become so widespread during recent years in Canada. The organization is one of which every member may feel proud. It has been true to the great interest which it represents. It has been performing a magnificent work in moulding the industrial life of the Dominion. What its possibilities for the future are it would be difficult to estimate. We are only learning year by year what can be accomplished by unity and co-operation. I feel, however, that there is a future of usefulness and greatness for this Association which will far exceed even the most sanguine anticipations of those stalwart men who, at the time of reorganization, laid its foundations, and who have since given so unselfishly for its welfare.

WORK OF THE PAST YEAR.

The past year has been one of progress on every hand. It opened with a splendid Convention, which was followed by an excursion to the far West—an excursion whose magnitude and splendid national results have, perhaps, not been excelled in the Dominion. As Canadians, the conditions demand that we must come into closer contact with our fellow-citizens in every part of the Dominion, and, indeed, in other parts of the Empire, for interest leads to knowledge, and, knowing ourselves and each other, we come to realize our true greatness and our destiny. I hope that each succeeding year will see an excursion organized and carried out under the auspices of this Association; and if the reception given your representatives has any resemblance to the welcome accorded us in our Canadian West, or if the results have one-half the significance, then I say the Association is performing a magnificent service in building up the Dominion and the Empire of which we form a part.

I cannot refer at length to all the work performed by our Standing Committees during the past year, but there are a few features worthy of special mention.

TRANSPORTATION DEPARTMENT.

Perhaps the greatest achievement of the Association since the last annual meeting has been the establishing of the Transportation Department, which is under the guidance of our able Railway and Transportation Committee.

I refer to the inauguration of the Transportation Department as an evidence at once of the progressive ten-

dencies of our organization, and a disposition to make any reasonable extension in the scope of our operations that may be called forth by the development of our trade or the furtherance of our legitimate interests.

Our action in this regard was viewed with some suspicion. The operations of the Department met with some slight opposition. This opposition a conservative and reasonable administration of the Department will tend to remove. The organization of this Department is not an expression of a want of confidence in the transportation companies, or of a desire to curtail their reasonable privileges and revenues. It springs purely from a desire that our difficulties shall be properly presented to the railways by one having a railway training and a grasp of the general transportation interests of our Association.

There was some uncertainty at first as to the direction to be taken by the Department in operation, but this, time has shown that on account of the varied interests of the Association, and for other obvious reasons, the function of the Department should be largely advisory.

The Board of Railway Commissioners, in that it has with some few exceptions the absolute control of the railway rates of Canada, with the power of making and removing discriminations, is able to accomplish, and so far has accomplished, much good. It is not, however, the intention of this Association to take up the time of the Board with the cases of its members except as a last resort. Our desire is to exhaust every expedient, where we consider our cases are just, to secure from the railways themselves the measure of justice to which we consider our members are entitled. We desire to see the best results attend the operations of the railways, and the success of our industries tends in a large measure to produce these results. Differences of opinion between our members and the transportation companies as to what is reasonable in our respective interests will naturally arise from time to time; and it stands to reason that our organization must, on behalf of its members, make provision for proper and expert representation of our interests. We are not seeking to gain any undue advantage in this or in any of our departments. We are always desirous of obtaining that reasonable and judicious administration of the Department which will be most in keeping with the dignity of this Association. I consider that the Department has been conducted under difficult circumstances with the minimum of friction. Continued on the same broad and reasonable lines upon which it has been inaugurated, I feel sure that it will be of the highest importance to the manufacturing industries of our vast country, and that it will be an ever-increasing power in preserving a fine equilibrium and promoting a hearty co-operation between the Canadian railway companies and Canadian shippers.

LEGISLATION.

I must refer also in the most appreciative manner to the work done by our Parliamentary Committee. The manufacturers of Canada, whether they are members of this Association or not, will probably never know how much they owe to this Committee. I wish also to state that the Governments of Canada in so far as they come in contact with it, are greatly indebted to the Association for practical information and business forethought concerning industrial legislation. It is worth a great deal to you busy manufacturers who cannot examine every bill introduced into Parliament, to know that your interests are being carefully watched by your representatives. It is worth a great deal to our Governments, and statesmen also, to be wisely advised by a committee of expert responsible business men, who have at heart the progress of the country, and who are sufficiently interested in its welfare, to follow with the closest attention the work of the Parliaments of Canada.

THE LABOR QUESTION.

One of the most difficult duties of this Committee, yet one of the most important, has been the carrying out of the policy of the Association on the labor question.

No one can seriously consider the position of the Canadian people in relation to their commercial competitors outside of the Dominion, without being convinced that it is in the interest of the Canadian workman, and the Canadian employer, to work together hand in hand, for the protection of native products, and not only this, but to endeavor to arrive at a mutual understanding, that will make for peace between capital and labor, and that will prevent the development of class antagonism in this country.

Canada is, in the best sense, the most democratic country in the world. There is no wide gulf fixed between the man who works with his hands, and the man who not only works with his head, supplying the administrative ability, but also provides and risks the necessary capital for the safe operation of the industry. The interests of both are identical. Under our free system, the workman of to-day frequently becomes the employer of to-morrow. Surely the prevailing spirit of Canadian industrial life should therefore be friendly co-operation between labor and capital instead of continual antagonism.



G. A. VANDRY
Chairman Quebec Branch

No reasonable man can object to our workpeople organizing for the advancement of their mutual interests so long as these organizations do not attempt to dictate to employers in matters that should be solely under the employers' control, or interfere with the rights of individuals who may not belong to their organizations, or with the right of employers to engage such independent or other labor as they see fit, without question as to what, if any, organization the individual may belong to.

Equally there can be no objection to the organization of employers, as well as the organization of labor, and I believe that such organizations of capital and labor, if carried on in a proper spirit, can be made to work in the best interests of all. To accomplish this result both classes of organization should be honest enough and strong enough, to accept full responsibility

for their acts by the due and legal incorporation of their associations under the laws of our common country.

THE INTERNATIONAL PHASE.

In Canada to-day the great majority of the labor organizations are international, and owing to the greater preponderance of membership in the United States, the management and control lies in the hands of aliens, whose interests, are, to say the least, not the same as ours; in fact, the interests of Canadian labor are commercially opposed to and competitive with the interests of labor outside of Canada. Under present conditions Canadian interests are liable to be damaged, and the good feeling that should exist between employer and employee endangered by differences arising in the United States, with respect to which Canadians have no interest whatever. Then, again, we are exposed to misunderstandings having their origin in advice given by officers of such associations, residents of the United States, who probably neither know nor care much what the ultimate effect will be in Canada.

We all know, too, that large sums of money are being constantly remitted from Canada to the United States to support organizations domiciled there. Personally, I cannot see any good reason for this. It is stated, on the other hand, that Canadian employers are similarly affiliated with international organizations, though as far as I can learn this is true of only two or three Associations, with a very limited Canadian membership, aggregating, at most, not more than a score of Canadian firms.

From every point of view it seems to me that to obtain the best results for all concerned our labor associations and our capital associations should be solely Canadian in interest and membership. We are surely old enough, and competent enough, to care for our own affairs, and it seems to me we should try and settle our family troubles at home, without calling in outsiders. With Canadian labor and capital organized under Canadian laws, and independent of outside influences, the various trades could appoint from among themselves, conciliatory committees for each class of trade, composed of an equal number of employers and employees, representative of their organization, to whom disputes of any kind could be referred, and, failing an agreement, an arbitrator, preferably a judge of one of our higher Courts, could act as referee. A somewhat similar principle to this has been adopted in Great Britain in the engineering trade, and has worked to good advantage. Strikes have been avoided, and questions have been settled in an equitable manner, and for some years past we have not heard of any strike in the engineering trade in Great Britain. It does not seem to me that there is any necessity of making special reference to the question of strikes, as both employers and employees know what that means, and how unsatisfactory is a strike from every point of view. Heavy loss is entailed to both sides, and the result in the end, is generally a compromise, or settlement of some kind that could have been just as easily arrived at without a strike if some such system of conciliatory boards—formed of men conversant with the details of the business under discussion—was adopted.

SETTLEMENT OF DISPUTES.

As I have already ventured to suggest, I believe that the Canadian Manufacturers' Association can do a great deal towards such an object. Labor is pretty thoroughly organized in the various trades already, and in some trades, at least, the employers are organized also. Where such organizations are international, separation should be an easy step, and the Associations should be nationalized by incorporation, and thus made distinctly Canadian. When this has been done various trades could, I think, easily be brought together through the efforts of such an Association as ours, and conciliatory boards formed that could deal with the question of wages and other questions that from time to time may arise; thus bringing about in an amicable, sensible, and businesslike way the settlement of disputes, without resorting to the present disastrous policy of strikes and lockouts.

If the employers' associations would take the first step towards nationalization of their organizations, and follow it up in the different trades by proper representations to their employees, I feel sure that in a short time the first object would be attained, that is, of making both classes of associations absolutely Canadian in interests and membership, and subsequently the next step towards conciliatory committees would be a very easy one, I believe, as I feel confident that employees realize quite as fully as we do the value of some such honest and sensible basis of arrangement.

It is unjust to accuse the manufacturers of Canada of desiring to oppress their employees. This Association has never encouraged any combination for the purpose of reducing wages, nor do I know of any such combination in Canada, in any branch of industry.

It is also absurd to charge the manufacturers of Canada with preferring alien labor to the Canadian workman. There are times when expert labor must be imported, and there are times when the undertaking of large contracts demand on short notice an increased number of employees. In such emergencies, with the welfare of the country at heart, we must demand that no unreasonable barriers shall prevent our progress. But the Canadian manufacturer will not choose a foreign workman in preference to his own fellow-Canadian. Our common citizenship and mutual prosperity should inspire this faith between employer and employee. In Canada we should have sixty millions of people instead of six millions, and while our Government is spending hundreds of thousands of dollars every year to attract desirable agricultural settlers to our shores, we must ask at least that no unnatural restrictions be placed upon the immigration of skilled artizans.

TECHNICAL EDUCATION.

This leads me to say a word regarding the need in Canada of some national effort for securing technical education. If our own people are to become leaders in their industries, and if our nation is to hold a place in the world's competition, we must follow the example of Germany, the United States, and Great Britain, in the establishment of training schools for Canadians within our own borders. I hope that this important question will receive consideration from the Canadian Government during the coming year.

FIRE INSURANCE.

One of the most important questions that has received the consideration of the Association during the past year is that of Fire Insurance. It is a subject which interests every manufacturer, because it affects the cost of his product. Our manufacturers are not only competing with each other, they are competing with the world, and an effort to improve the conditions governing fire insurance may justly be regarded as worthy of careful attention on the part of this Association.

The insurance companies, owing to serious losses and inefficient fire equipment, in a number of Canadian cities have made material increases in their rates. This additional expense bore so heavily on many of the members of the Association and increased their cost of production to such an extent, that a Committee was appointed to make an exhaustive investigation into the causes for such serious increases, and to suggest, if it were deemed advisable, some method for securing relief.

The National Association of Manufacturers of the United States, at their Annual Convention, in Pittsburg, this year, appointed a Committee, which is now working on behalf of its members along lines similar to those adopted by this Association.

The circumstances surrounding the present situation are well known to the members of the Association, as they have excited widespread interest during the past few months. As a result of the high rates demanded, especially in the congested districts of our cities, an increasingly large number of risks are being placed each year outside of Canada, particularly with the New England Mutual Companies. These companies, some of which were organized as far back as seventy years ago, to insure manufacturers in specific lines, have conducted their business in a highly successful manner and with great satisfaction to the insured. Their requirements in isolation, construction, and protection are such that their advantageous rates can be obtained by only a very small percentage of our members. Their aim is to prevent fires rather than pay for them, and they have a most complete system of inspection. On the other hand, the inspection by companies licensed in Canada is generally conceded to be very deficient. Many good risks are allowed to become dangerous through the joint negligence of insurer and insured, and premiums are not always adjusted equitably.

The whole question is one of the utmost importance. The members of this Association carry more insurance than the members of any other organization in Canada. Our interests are too large to be neglected by ourselves or disregarded by others, and the report of the Insurance Committee on the broad and businesslike investigation that has been conducted, will merit the careful consideration of the Association. Whether or not the recommendations of the Committee are adopted by the Association, the investigation must command the approval of every member, and I am sure the results of their deliberations will be received with the greatest interest.

CLOSING WORDS.

In concluding my reference to the immediate work of the Association during the past year, I desire to acknowledge most cordially the debt we owe to the members of the Executive Council of 1904, and to the gentlemen composing the Standing Committees. They have devoted their time and talents freely and generously to the advancement of your interests and the general industrial interests of Canada, and whatever progress we have made, or whatever good we have accomplished during the past year, is due in a very large measure to their efforts.

Will you permit me also to testify publicly to the splendid services rendered to the Association by our General Secretary, Mr. R. J. Younge, B.A. Presidents and Executive Councils come and go, but upon our Chief Executive Official, our General Secretary, must devolve at all times, the responsibility of management, the responsibility of vigilantly guarding your interests. The office demands the services of a man of undoubted ability, great tact, and untiring energy. You will agree with me that Mr. Younge has shown all these qualities, and that his work during the past year is deserving of our highest commendation.

I would also like to record my appreciation of the excellent services rendered by the general staff, and would especially mention the Branch Secretaries, Mr. E. H. Cooper, B.A., of Montreal, and Mr. J. F. M. Stewart, B.A., of Toronto, gentlemen of undoubted ability, and eminently qualified by education and experience to carry on the business of this Association in the important centres in which they are located.

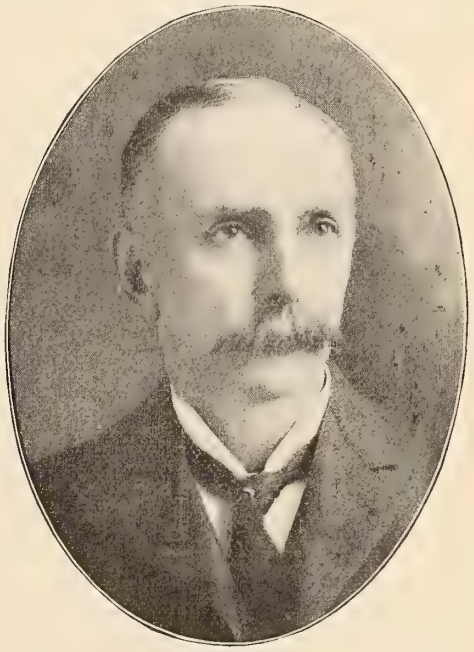
And now, gentlemen, in closing, let me thank you individually and collectively for the loyal and friendly support you have given me throughout my term of office. It has been to me an honor, a privilege, and a pleasure to preside over this great Association during the past year, and I count myself happy in the opportunity offered for useful work, and in the many warm friendships formed with my fellow members—friendships that I venture to hope will last through life.

A MESSAGE FOR CANADIANS.

If I have a message to deliver to my fellow members on retiring from the Presidency, it is to stand together for the preservation and advancement of Canadian industries, for the preservation of the base from which your capital and labor must work—the home market. Let Canadians be known for their fair dealing and business integrity the world over. Take pride in your national products. Let administrative ability and technical knowledge combine to produce by the most modern methods, and with up-to-date equipment, goods that will set the standard of excellence everywhere, and that only need to be stamped "Made in Canada" to ensure appreciative recognition and praise in every market.

In the building up of our country let us be broad and fair-minded in all our measures. Let us see to it that we place no embargo on brains, brawn, or capital, because all these forces are necessary in the development of this great country

Make Canada attractive as a home to desirable people from all lands, and protect the product of their labor when they come to us.



GEORGE F. BRYAN
Chairman Manitoba Branch

Stand for permanent unity between Canada and the Empire to which we belong, and remember that in this unity lies our very existence as a free and powerful people. Here is work for the highest intellects, here is a subject worthy of the strongest minded statesmen in every part of the Empire. With our Maritime interests in all parts of the globe, with every variety of soil and climate, physical and intellectual resources immeasurable, consider, gentlemen, what it would mean if all were united in one common bond of national interest. With such a consummation no power on earth could serve to prevent commercially or otherwise, our progress, nationally and imperially.

MR. EDWARD GURNEY.

Mr. Edward Gurney (Toronto)—Mr. President, I rise to move a vote of thanks to you for the service that you have done for this Association and for Canada in the preparation and delivery of this address. I have known you for many years, and have always admired your persuasive and genial methods. I think, sir, that you will agree with me when I say that you as a boy made your first sale to me as a commercial traveller. (Applause.) And I know how

impossible it was on that occasion for me to meet your wiles and your genial and kindly insinuating manner. (Laughter.) Since that time I have known you, sir, intimately, and I have no hesitation in saying that if the young men of our country were inspired by the same public spirit and the same unselfish devotion to the interests of our country we should have a Canada that is not constituted as she is to-day.

I have remarked to the members of this Association before that we in Canada are "herded together"—that if I express a given opinion upon the tariff, a man at once puts his finger on his nose so and says, "He's a Tory"; and if I express another opinion in relation to some great social question, they will say, "Why, he is an employer of labor." If I express another opinion upon some great social question, man will easily say, "Well, he is a labor union man and a socialist." We are all owned by somebody, either by the Church or by a party. If like this, men would study these great questions and decide for themselves how they think, and then would step up to the polls on election day and show people how they think, this country, this Canada of ours, would not have to face the disgraceful statistics that exist as to trade between Canada, Great Britain and the United States. (Applause.)

NEED FOR ACTION.

Mr. Chairman, we all know that something is the matter with us. The other day the Government showed it, because they brought out something that they called a Dumping Clause. You remember when Mrs. Dombey died poor Paul Dombey was left without a mother, and Mr. Chick said, "Couldn't something temporary be done with the tea-pot." Mr. Chairman, our people at Ottawa have been trying "to do something temporary with the tea-pot." (Laughter.) What we need in this country is a body of business men who think and act—people who do things. To-day we have in Ottawa a Government that is looking about and wondering. We have an Opposition that is looking around also and wondering as to what will be popular, what will catch the votes.

If our people who represent us at Ottawa were in closer contact with us, if we, instead of allowing ourselves to be governed, would constitute ourselves the governing body of this country by bringing influence to bear upon our Government and our Opposition instead of standing back like a lot of children having nothing to do with the case, we would have at Ottawa a condition of things that would show the people to the south of us that we are a living, virile, earnest people who know how to do business. (Applause.)

Mr. Chairman, I have been living in New England during the last month, and reading their papers every day, and they say to you and to me, and to the people down there who favor a reciprocal tariff, and quite justly, "Reciprocity in what? We have got everything that they have got to give, and we have got what we have got of our own, and we will keep it." Mr. Chairman, what we want to do in this country is to wake up, and I thank God that there are a lot of young men coming on in this country who are getting farther and farther and farther away from the thought of the old family compacts. Why, sir, there are men, they say, in Tennessee who are voting for Andrew Jackson to-day, and there are men to-day whose politics do not get further forward than the days of the Family Compact. What divides us to-day? There is no division as between parties in this country. We have one general purpose, and that is, the building up of Canada. (Hear, hear.) All that the good people of this country need to do is to show they are in earnest. We have settled some things. We have settled one thing, and that is, we are going to have a Canadian nationality on this continent. (Hear, hear.) It is to be in contact with Great Britain, and to form part of the British Empire. (Applause.) It has not been settled so very long, but it is settled. We have decided that. (Applause.)

IMPERIAL FEDERATION.

Now, Mr. Chairman, let us take hold of these great questions which you have initiated or suggested to-night, and let us look them in the face. Let us in discussion of the great question of Imperial Federation which you have suggested make up our mind that we will be fair. In the recent congress of Chambers of Commerce at Montreal it was said in a kind of way, so much of preference for so much defence. In the Lord's name let us get rid of all that nonsense. We owe it to Great Britain to take our place as part of the British nation and do our share in relation to defence and in relation to offence, I think. (Hear, hear, and applause.) We owe it to our national manhood not any longer to be paupers. (Hear, hear.) What shall be our contribution? I don't know; but let it be without any reference to any sordid motive. We owe it; we owe it to our mother, and let us in God's name do what we should in relation to that great question. Let us go to Ottawa and say to them, We owe it to the Mother Country, and we will do our share; let us find out what it is.

Now, sir, I think I could make a speech about as long as yours on that, but I am not prepared to do it. This Association owes you a great debt. The people of Canada owe you a great debt for that magnificent address. I hope it will be read by the people. I hope it will be read by our legislators. I hope it will wake us all up. (Applause.)

The President—Ladies and Gentlemen, I just want to thank you most cordially, Mr. Gurney, for your kind speech. You carried me back twenty years. I think some of you will know where I drew my first breath in strong Canadian sentiment when you heard Mr. Gurney speak to-night. I can honestly say Mr. Gurney is one of the men who for twenty-five years I have known as a staunch, strong-minded Canadian, who knew nothing of party when it came to the question of the good of his country; and that is the kind of men that make this country something. I want to thank you, Mr. Gurney, for your kindness. (Applause.)

MR. R. H. ALEXANDER.

Mr. R. H. Alexander (Vancouver)—Ladies and Gentlemen,—I am sure it is a great pleasure I have in seconding such a resolution. I think it requires no great effort on the part of the speaker to convince his hearers that it is a just and proper thing to pass it unanimously and in the most hearty manner.

As I come from the farthest Province on the Pacific Coast having a branch of this Association, I think that in according to me the pleasure of seconding this motion to-night it must have been with the idea of emphasizing the width and breadth of this Association—that it extends from the Atlantic to the Pacific, and that it is not looking after the interests of any one particular section of country, but that it is looking after the interests of the manufacturers of the whole Dominion in which we have so much pride.

I think that there is a great work for the Association. It seems to me that it is a bond for all the manufacturers and commercial men from one end of this Dominion to the other, and, as intimated by the mover of the resolution, it will effect a great thing when it removes questions affecting the manufacturing and commercial interests of Canada from the arena of party politics. These questions should be dealt

with, not as they may influence votes at the next election, but in a purely business spirit, in a business manner, in the way of the advancement of the business interests of Canada. (Applause.)

I think we all owe a great debt of thanks to our worthy President, not only for the very able address that he has given us this evening, but also for the work he has done during the past year; and whilst passing this vote of thanks let us resolve, as the rank and file of the Association, that we will further his efforts and those of the officers of the Association by working loyally to make the Association a living force for the advancement of the manufacturing industries of Canada. (Applause.)

Mr. Gurney put the resolution which, on a vote having been taken, was carried amid applause, followed by three cheers for the President and the singing of "For He's a Jolly Good Fellow."

Mr. Gurney: Mr. Chairman, it is not necessary that I should make any remarks in presenting this vote of thanks.



ALFRED DICKIE
Chairman Nova Scotia Branch

You have been here, and you know the spirit of the meeting because you have eyes to see and ears to hear. (Applause.)

The President: Mr. Gurney, Mr. Alexander and Gentlemen,—I have already made my speech in reply, so you will forgive me if I simply say, Thank you. I do appreciate the fact that one gentleman in Toronto and another on the Pacific Slope are the mover and seconder of this resolution. I thank you all. I have only done my duty. (Voice: Done it well.) You are going to have in my successor a man who is going to carry on the great work of this Association loyally and faithfully.

I am now going to ask Sir Lloyd Wise, who is with us, to address you, and I must say how glad I am on your behalf to welcome him from the Old Land. (Applause.)

SIR LLOYD WISE.

Sir W. Lloyd Wise (London, Eng.): Mr. President, Ladies and Gentlemen,—I came from the Old Country to re-visit this Dominion principally because I was so kindly received here about two years ago. I then had the honor of offering some suggestions which I hoped might be conducive to the promotion of the manufacturing industries of this great Dominion—suggestions, several of which, I am proud to say, have been adopted in the legislation of the Dominion, and which I hope from the bottom of my heart will prove beneficial to the Dominion, and especially to the manufacturing interests of the Dominion. (Hear, hear.)

It was suggested to me when I was over before by a very prominent and influential member of this great Association that if I wrote something on the particular subject I have made a life-long study, it would be carefully considered by this great body. Accordingly, I have written something. I will show it to you—don't be frightened There are here some twenty-six pages of closely typewritten matter. That is all the reading of it I am going to give you. But that matter, I believe, sir, is intended to be taken as read, to be printed, and to be distributed to the members of the Association. (Applause.)

I can only say, sir, that I trust the members will read what I have written, dry as it is, and technical as it is, and that in reading it they will believe me when I tell them that what is written has been dictated by a sincere desire to do good in the Dominion—(Hear, hear)—and has been written by one who does not look upon Great Britain as constituting the whole of the British Empire.

I listened this evening with intense interest to the most able and carefully-thought-out address of your President. I never heard a more able or more convincing address, and I have heard many in my time. (Applause.) Of course, he dealt with many problems, some of them very difficult problems, some of them problems as to which in this hall there might be minor differences of opinion, but they are unquestionably all of them problems of the first importance to this important section of the great British Empire. (Hear, hear.)

I hope most sincerely, ladies and gentlemen, that the time is not far distant when the ties of Empire will become stronger and stronger; when the trading between this great Dominion and the Old Country will vastly increase to the exclusion of much of the foreign trade which obtains at the present time, much to the disgust, I can assure you, of many loyal Englishmen. (Hear, hear.)

I will not attempt now at this late hour to take up any more time, but I thank you most sincerely, sir, for having so kindly given me the opportunity of saying a few words, and I thank you, ladies and gentlemen, for the great courtesy you have extended to me. (Applause.)

Upon the conclusion of this address the meeting was brought to a close by the singing of "God Save the King."

FIRST BUSINESS SESSION

Tuesday, September 21st, 10 o'clock a.m. The President, in the chair, called the convention to order, and requested the Secretary to read the minutes of the last annual meeting.

On motion of Mr. J. O. Thorn (Toronto), seconded by Mr. L. C. Van Bever (Toronto), the minutes of the last annual meeting were taken as read and adopted.

The President requested the Secretary to read the letters of regret which had been received.

The Secretary: Regrets have been received from the following: Lord Strathcona, Sir John Colomb, Mr. W. Hayes Fisher, M.P., Sir Alfred Lyttleton, M.P., Sir Robert Bond (Newfoundland), Mr. Alfred Dickie, Chairman of the Nova Scotia Branch; W. S. Fisher, Vice-President for New

Brunswick; Mr. John Hendry, Vice-President for British Columbia; Mr. George E. Amyot, Quebec; Mr. C. N. Candee, Toronto. In addition to these, there are two letters from officers of the National Association of Manufacturers of the United States, the President, Mr. D. M. Parry, and the Secretary, Mr. Marshall Cushing. The President's letter I should like very much to read to the convention. Mr. D. M. Parry, writing from Indianapolis on August 22nd, says:

MR. PARRY'S LETTER.

Mr. R. J. Younge, Secretary Canadian Manufacturers' Association, Toronto, Canada:

Dear Sir,—I have your esteemed favor of August 20th, and wish to thank you for your very cordial invitation to be present at the thirty-third annual convention of your Association, to be held next September in Montreal. I wish to say that nothing would give me more pleasure than to be with you at your annual meeting, but owing to arrangements which have been made for some time I do not see how it will be possible for me to be present.

We have heard much of the Canadian Manufacturers' Association, and we know of the good work that you have done in the past, and from time to time we hear of the things that you are doing to-day and of what you propose to do in the future. When responsibility of developing the membership of the National Association of Manufacturers fell upon me, one of my first acts was to write for the constitution and literature of your Association. The work that you had already performed proved of great value to our Association in enlarging its field of usefulness. I am a great believer in the value of organization among manufacturers and other employers of labor, and I foresee a great future for both the Canadian Manufacturers' Association and the National Association of Manufacturers of the United States, of which I have the honor to be President. Both of these organizations, composing the manufacturing strength of their respective countries, must have much to do in the directing of the industrial destinies of the two countries. Many hard problems will confront us, and if they cannot be solved by the men who have the brains, which have already brought the manufacturing interests of the United States and Canada to their present high standard of development, then these problems are unsolvable. But I do not believe that this will prove to be the case.

Let me extend to you and the members of your Association my most hearty thanks for your kind invitation. Wishing you the best of success, I am,

Yours very truly,

D. M. Parry,

President National Association of Manufacturers.

The President: I will now call upon the Treasurer for his report.

Mr. George Booth, of Toronto, presented the Treasurer's report and moved its adoption. The report is as follows:

REPORT OF THE TREASURER

FINANCIAL STATEMENT FOR THE YEAR ENDING 31st JULY, 1904

CASH ACCOUNT

RECEIPTS			DISBURSEMENTS		
Cash Balance, 31st July, 1903		$ 405 36	Bank Overdraft		$ 585 35
Fees	$17,825 00		Trade Index		4,663 18
Industrial Canada	6,269 24		Industrial Canada		6,683 64
Commercial Reports	98 20		Commercial Reports		45 04
Woollen Section	128 17		Fees		10 00
Annual Banquets	476 00		Newfoundland Excursion		522 88
Pacific Excursion Banquet	409 00		Furniture and Fittings		256 20
Educational Campaign	48 45		Annual Meeting		343 77
Interest	82 64		Translations		39 48
Translations	37 33		Woollen Section		437 02
Pacific Excursion	40 24		Annual Banquet		578 90
Expense	21 05		Dominion Exhibition, Winnipeg		367 31
Trade Index and Sundry Accounts	8,981 81		Pacific Excursion		15 39
		$34,417 13	Legal Expenses		630 00
			Petty Cash		25 00
			Pacific Excursion Banquet		346 50
			Receptions		151 46
				$15,701 12	
			Express		22 43
			Postage		1,520 28
			Printing and Stationery		1,145 37
			Rent and Light		622 02
			Salaries		4,040 98
			Telephones and Telegraph		164 18
			Travelling Expenses		547 48
			Exchange		125 53
			Certificates		149 03
			Commission		18 00
			Toronto Branch		90 17
			Montreal "		2,318 10
			Manitoba "		79 47
			B. C. "		272 84
			N. S. "		402 16
			Quebec "		169 09
			Sundries		338 62
			Transportation Dept.		2,279 24
					$30,006 11
			Cash on Hand, 31st July, 1904		4,816 38
		$ 34,822 49			$ 34,822 49

REVENUE ACCOUNT

To Newfoundland Excursion		$ 522 88	By Fees		$16,948 35
" Translations		40	" Commercial Reports		45 91
" Receptions		156 41	" Trade Index		3,481 81
" Woollen Section		93	" Interest		82 64
" Annual Meeting		369 77	" Pacific Excursion Banquet		28 50
" Express		22 43			$20,587 21
" Postage		1,520 28	" Balance 31st July, 1903		1,798 08
" Printing and Stationery		1,082 17			
" Rent and Light		673 52			
" Salaries		3,945 48			
" Telegraph and Telephone		197 89			
" Travelling Expenses		498 33			
" Exchange		125 53			
" Certificates		189 03			
" Commission		18 00			
" Toronto Branch		95 42			
" Montreal Branch		2,029 84			
" Manitoba Branch		79 47			
" British Columbia Branch		360 34			
" Nova Scotia Branch		432 61			
" Quebec Branch		169 09			
" Sundries		254 38			
" Transportation Department		2,131 89			
" Annual Banquets		102 90			
" Legal Account		630 00			
" Brantford Banquet		47 40			
" Industrial Canada		102 39			
" Insurance Committee		84 80			
" Provision for Bad Debts		480 00			
		$16,323 58			
" Balance 31st July, 1904		6,061 71			
		$22,385 29			$22,385 29

BALANCE SHEET

LIABILITIES			ASSETS.		
Fees unearned		$2,493 29	Fees owing, accrued due		$229 99
Accounts payable—			Furniture and Fittings—		
Account INDUSTRIAL CANADA	$268 14		Toronto	$1,004 42	
Expense Account, &c.	804 43		Montreal	649 85	
		$1,072 57	Transportation Department	247 00	
Balance, Surplus Assets		6,061 71			$1,901 27
			Stationery, &c.		136 34
			Advertisements, &c., accruing due 31st July, 1904, and owing	$2,576 03	
			Less Reserve	600 00	
					$1,976 03
			Educational Campaign		49 63
			Dominion Exhibition		492 93
			Petty Cash	$ 25 00	
			Cash on hand	4,816 38	
					$4,841 38
		$9,627 57			$9,627 57

GEO. BOOTH, Treasurer.

Audited and found correct,
WILTON C. EDDIS, F.C.A., Auditor.

It is with great pleasure that your Treasurer presents his Annual Statement. The year just closed has been from a financial standpoint the most successful which the Association has ever enjoyed. The receipts and expenditures have both exceeded those of all previous years; and it is most gratifying to report also that after extending our operations, and largely increasing our expenses, the Treasury contains the largest balance in the history of the organization.

This is due, not only to the unanimous response of those members who are paying increased fees, but to the careful management of your Finance Committee, who, month by month, have guided the expenditure of the Association's funds.

INTERESTING FEATURES.

It may be of interest to call to your attention a few of the more important features of the report. The fees received during the year amounted to $17,825 or more than six times the receipts four years ago and almost double the receipts from the same source last year. This is due in part to the growth in membership, and partly to the request made this year for an increased fee from the members who come within the advanced schedule adopted by the Association,—a request which met with a most gratifying response. Another feature worthy of recording is, that we entered upon the current year with liquid assets (after deducting all liabilities) amounting to the sum of $5,347

Add to this for

Members whose fees are in arrears..132
Less doubtful 26

106 × $10 = $1,060

Members' fees for 1904-05:

275 × $25 = $ 6,875
1275 × 10 = 12,750 ..... $19,625 20,685

and we have the sum of $26,032

This amount will pass into the Treasury during the current year, and it is presumed the policy that has been adopted hitherto will be continued and that the amount expended or liability incurred for fixed yearly charges on the Association will not

exceed in amount, the actual yearly revenue from membership fees.

INDUSTRIAL CANADA.

INDUSTRIAL CANADA has proved a phenomenal success, and although it owes the Treasury $1,292, from their financial statement, the asset is a good one and the paper is self sustaining.

The inauguration of the Transportation Department and its expenses for eight months have involved an outlay of nearly $2,300, an expenditure which has been fully justified by results.

Our expense for postage has increased during the past year by 50 per cent. and forms an indication of increased interest and activity in the Association work.

The offices in Toronto and Montreal have been equipped with additional furnishings to the amount of nearly $1,000.

THE FUTURE.

I believe that the future of the Association never was so bright as it is to-day. New and larger offices are required at once, and there are many directions in which the work of the



GEORGE BOOTH,
Treasurer.

Association might be extended to advantage. The thanks of the Association are due to the members for the cordial support which they have given during the year, and I earnestly bespeak from them the same hearty co-operation during the year upon which we are now entering.

All of which is respectfully submitted.

GEORGE BOOTH,
Treasurer.

Mr. C. A. Birge (Hamilton): I have very much pleasure in seconding the adoption of the report, the best in the history of the Manufacturers' Association.

A PRINTED REPORT.

Mr. Robert C. Wilkins (Montreal): I would like to say, Mr. President, in connection with the motion for the adoption of the report, that as a member of this Association it is very gratifying, indeed, I am sure, to us all to know that the report for this year is so satisfactory. There is just one thing I would like to say, namely, that I think it would be very much more satisfactory if a copy of the financial statement was printed and given to each member of the Association at the annual meeting. I think you will all agree with me when I say it is always difficult to follow figures when read, and as it is difficult, those members who might at any time wish to criticize the report or ask pertinent questions are prohibited from doing so for fear of making a blunder in not quite comprehending the report. I beg respectfully to submit that it would be a great advantage to the members of this Association if the report were printed and distributed early at the annual meeting or before, so that each and every member could see exactly what had been done with the funds. (Applause.)

Mr. Booth: I think, Mr. President, the suggestion is a very good one. I omitted to state that this statement has been audited by the auditor.

The President: There is no doubt about it. The suggestion is a good one. There is no doubt the report is very gratifying to every member of the Association, especially to its treasurer, and I am sure we will adopt this unanimously; and then I suggest you forward a motion that hereafter it be printed and put in the hands of the members.

The President put the motion to adopt the report, which, on a vote having been taken, was declared carried.

Mr. Wilkins: I beg to move that in future the financial report of this Association be printed and given to each member of the Association before the annual meeting.

Mr. J. O. Thorn: I second the motion.

Mr. Birge: I suggest it would be better if that were made for the next year, and try it and see the result.

The President: You mean, Mr. Wilkins, that it should be supplied to those present at the annual meeting?

Mr. Wilkins: Yes; we don't want to make it too extensive. Supplied only to those who take the trouble to attend the annual meeting.

Mr. Birge: I would suggest that it be for the next year only.

Mr. Wilkins: I will make it for the coming year.

Mr. Jas. P. Murray (Toronto): I think, sir, I would leave that to be referred to the committee to be called "The Convention Committee" if the convention adopt the idea. I think all matters for submission to the annual convention might be left to that incoming committee to decide what would be wise and what would not be wise to place before the convention. I think that the idea of the members having the financial statement in their hands on occasions might be very good, on other occasions it might not be quite so good; and it must be in charge of somebody to decide when that shall and shall not be presented to the convention. Therefore, I suggest that if it falls in with the view of the mover, Mr. Wilkins, that it be left to the Convention Committee to decide whether it be distributed publicly before the convention meets or not.

The President: Without desiring to pronounce upon it at all, I think the members present should be entitled to know the financial position of the Association.

Mr. Booth: I have had the honor of holding this position for a great many years, and I can never remember the time when we had anything in our statement we would not like the world to know. (Applause.)

The President: Unless you wish to move an amendment I shall put the question.

Mr. Murray: I do not wish to move any amendment; I only give that idea; not that it should not be given to a convention here, but it should not be made public.

The President put the motion, which, on a vote having been taken, was declared carried.

The President: I will now ask the Secretary, Mr. Younge, to read his report.

Mr. Younge presented his report as follows:

REPORT OF THE SECRETARY

Your Secretary begs to present the following report: The year just closed has been the most successful in the history of our organization. Four years ago the Canadian Manufacturers' Association was largely a provincial organization with one office, and less than two hundred members. To-day we number fifteen hundred members, in every Province of the Dominion, with six branch offices and thirteen sections, and we combine in our organization active committees, whose functions cover the consideration of every important question affecting the manufacturing industries of Canada.

THE YEAR'S PROGRESS.

Many notable advances have taken place in the Association's work during the past year. The membership shows a net increase of 246; a Transportation Department has been inaugurated; another edition of the Trade Index has been distributed throughout the world; plans have been laid for a new system of correspondent membership in foreign markets; the question of insurance for members of the Association has been carefully investigated with a view to providing safe and less costly insurance; a general revision of the Canadian tariff has been hastened; an excursion across the continent was undertaken and successfully carried out; and many valuable benefits with respect to legislation, transportation, labor supply, export trade and other important issues have accrued not only to members of the Association, but to manufacturers in every part of Canada.

Not only must the Association be recognized as a stimulating and fostering influence so far as manufacturing industries are concerned; it is making itself felt as a national organization, in binding the distant provinces of our land closer together, in advertising Canada abroad, and in cultivating a national patriotism for all things Canadian in every part of the Dominion.

WORK AT THE HEAD OFFICE.

The more prominent features of the work are fully covered in the reports of the various Committees which will be submitted to this Convention. Upon all of these the fullest discussion is invited from every member present, in order that we may prosecute our work with the utmost efficiency, and with regard for every interest, great or small, represented in the industries of our land.

A few facts regarding the practical work of the Association may be of interest. At the head office five officers give their whole time to the work of the Association, and, including the Branch Secretaries, the salaried employees of the organization are twenty in number, as compared with three four years ago.

INDUSTRIAL CANADA, the official organ, has made remarkable progress during the year, and is to-day recognized as one of the brightest journals of its kind on the continent.

More than two thousand five hundred trade enquiries from every part of the world have been forwarded to the members. One hundred and twenty committee meetings have been held during the year at the head office alone, with an average attendance of six; and the influence of the Association has been exerted successfully upon ten important legislative measures.

Notwithstanding the extension of the work upon many lines, involving considerable increases in the expenditures, the Treasurer is able to present the most satisfactorily financial report in the history of the organization.

In brief, there are many evidences of success which must be viewed with extreme gratification, and in many directions widening fields of usefulness are opening up which, with the functions already being performed, indicate plainly the advantages and, we may safely add, the necessity of the organization.

OFFICERS AND COMMITTEES.

While much has been done, there remains much more to do—in fact, every great problem in our national development presents a field for the careful and systematic work of such committees as are constantly in the service of this Association. How much can be accomplished depends largely upon the interest which the members take in the organization. In this connection and for the information of the members generally I wish to refer briefly and with deep appreciation to the untiring faithfulness of the other officers and the members of the various Committees. The President, though resident in Montreal and absent from Canada for a considerable portion of the year, kept in constant touch with all the work, and was always at the helm. The First Vice-President and the Treasurer have labored unceasingly upon all the Committees; the members of the Executive Council have convened every month at their own expense and inconvenience; while the members of the standing committees and the officers in the local branches have displayed a devotion in their work which has been most encouraging to the officers, and indispensable to the success of the Association. I mention these services particularly because they are rendered without reward, and the members of the Association at a distance from the offices can scarcely estimate the amount of time which these men devote to the general welfare of Canadian manufacturing industries, through the various channels of the Association.



R. J. YOUNGE,
Secretary

THE COMING YEAR.

It was the wish of the members expressed at the last Annual Meeting, that we should extend our work, and they furnished us with an increased revenue to make such extension possible. We have begun to carry out their wishes, but we have only begun. We should have at least a thousand more members in this Association. We should have larger and better offices; we should have a larger office staff; we should have a Rest Fund available at any time for carrying out important enterprises. All of these and other facilities, with a view to serving our members more completely in every problem which confronts them.

Let me ask that the members generally should take a deeper interest in our work, that they should take advantage of all the facilities we have provided for them, and that they should seek by personal efforts to enlarge the membership. I can promise them at all times the prompt and cordial assistance of the officers.

THE STAFF.

I desire before closing to refer to the very efficient support which has been given to me throughout the year by all the members of the staff: Mr. Stewart, Mr. Miller, Mr. Murray, Mr. Anderson and the assistants. The work has been very heavy and they have not adopted "Union hours." Mr. Cooper, in the Montreal office, has been a tower of strength, and all the other Branch Secretaries have performed their duties with entire satisfaction. The splendid services of Mr. Watson Griffin also deserve the highest praise. To all of these my personal thanks are due, and I record it with the greatest pleasure.

Respectfully submitted,

R. J. YOUNGE,
Secretary.

Mr. Cockshutt (Brantford): I have much pleasure in moving the adoption of that report. I think it shows the course of advancement of the Association. The organization has been going ahead very materially during the last few years, and I believe we have in our secretaries and general staff of the Association men who are worthy of our confidence. I have come in contact with them more or less, and I feel that every member of the Association who comes in contact with these men realizes they have the interests of the Association at heart. We cannot depreciate the fact that the Secretary and those in the offices feel encouraged by having the members of the Association go in to see them and to help them with their work.

There is nothing to me in the Manufacturers' Association except that which is for the promotion of the manufacturing interests of this country; and I believe the staff which we have in connection with our Association is one that is in every degree competent to carry on the work of this Association. I have much pleasure in moving the adoption of the report which we have just heard read by our General Secretary. (Applause).

Mr. Jas. Hedley (Monetary Times, Toronto): I am particularly pleased to be present to hear and second the motion which has been made of thanks to the Secretary for his report. I consider it an admirable report, a model report; it is short and well condensed, full of meat, and very interesting. Mr. Younge with his accustomed modesty said very little about himself, but a good many of us know what a brick he is to work. He is entitled to our thanks. (Applause.)

The President put the motion to adopt the report, which, on a vote having been taken, was declared carried amid applause.

The President called for the report of the Reception and Membership Committee.

Mr. Robert Crean, of Toronto, Chairman of the committee, presented the report, which was received with applause. The report is as follows:

REPORT OF THE RECEPTION AND MEMBERSHIP COMMITTEE.

Your Reception and Membership Committee begs to submit the following brief summary of the work which it has accomplished during the past year.

At the last Annual Meeting of the Association, Mr. R. J. Christie was elected Chairman of your Committee. Mr. Christie finding it impossible to act, the present Chairman was appointed in his stead.

In all, sixteen meetings have been held, at twelve of which the Chairman presided. Mr. W. K. George attended twelve, Mr. George Booth and Mr. L. V. Dusseau ten each, Mr. George C. Gale and Mr. Thomas Roden nine each, and Mr. Frank A. Rolph and Mr. Maurice J. Taylor six each.

GROWTH IN MEMBERSHIP.

We are pleased to report a net increase of 246 in the membership of the Association. A membership campaign was inaugurated last fall with good results, but we cannot impress too strongly on the general membership the necessity that each of them should be a canvasser for the Association. Many new members can be secured by a little personal effort when the endeavors of the head office might not prove successful. There is still a large field to cover, and every member should undertake to do his part to strengthen the Association by increasing its membership. The growth during the past year has been as follows:

By Provinces.

Ontario	149
Quebec	94
Nova Scotia	14
British Columbia	34
New Brunswick	3
Manitoba	9
North-West Territories	5
Prince Edward Island	3
Total	311

During the year your committee has seen fit to recommend for acceptance sixty-five resignations, the majority of which were on account of business failures, amalgamations or retirement from business.

The membership at the present time is as follows:

Ontario	876
Quebec	412
Nova Scotia	84
British Columbia	69
New Brunswick	33
Manitoba	28
North-West Territories	6
Prince Edward Island	3
Total	1,511

THE WESTERN EXCURSION.

The Western Excursion, organized by your Reception and Membership Committee of last year, was more successful than even its most ardent advocates anticipated. As a pleasure trip the event could scarcely be excelled, and the results from a national standpoint were magnificent. The party travelled 6,500 miles, and visited 28 Western towns and cities. At every point the heartiest welcome was extended, and the kindliest feelings expressed.

EXCURSION BANQUET.

Your Committee considered that the great success of the excursion should be the theme for one of the monthly dinners of the Association. This dinner was held in the King Edward Hotel, Toronto, on November 19th, 1903. More than two hundred and fifty guests were present, and the splendid reports, together with the practical benefits of the excursion, have been productive of much good. The speakers were all members of the Association who had been on the excursion, and the gathering was most representative of our Association.

The excursion and banquet have been the means of enlightening Eastern Canada on the importance and possibilities of our great Dominion; they have brought the business men of

the East and West into close personal touch, and as a result they have awakened a greater spirit for a united national development than has before existed.

QUEBEC BANQUET.

Your Committee organized and with the help of our Quebec and Montreal branches, successfully carried out a brilliant banquet at the Chateau Frontenac, Quebec, on March 5th last. This gave particularly to our members in the Province of Quebec an opportunity for reunion. We are glad to report that the other provinces also were well represented. The guests at this banquet included representatives of the Dominion Parliament, the Quebec Legislature and the City of Quebec.

NEWFOUNDLAND EXCURSION.

It is with the greatest regret that your Committee reports that the proposed excursion to Newfoundland and the Maritime Provinces had to be indefinitely postponed. Your Committee spent much time in making arrangements, and the people of Newfoundland and the Maritime Provinces were preparing a warm welcome for our party.

Your Committee is of the opinion that great good could be accomplished by such an excursion. The personal intercourse of the business men of our sister colonies would bring about desirable closer relations, and although circumstances, over which we had no control, forced us to abandon the excursion this year, we hope it will be successfully carried out at a later date.

ANNUAL MEETING.

The general arrangements for the Annual Meeting of the Association have been carried out under the direction of your Committee. In our preparations, we had the valuable assistance of a special Committee appointed by the Montreal Branch. We believe that the present convention will be the most important the Association has ever held, and will mark the beginning of another year of progress and usefulness.

GREAT BRITAIN EXCURSION.

Your Committee has discussed on different occasions the desirability of organizing an excursion to Great Britain in the summer of 1905. A number of the members of the Association have expressed themselves strongly in favor of the project. The commercial relations between Canada and Great Britain and the present political questions before the British public are such that a visit to Great Britain by a representative body of Canadian business men would probably have far-reaching results. We wish in this connection to recommend to the Annual Meeting for their consideration the following resolution:

WHEREAS, If an excursion to Great Britain, to take place in the summer of 1905, can be organized amongst the members of this Association, we believe that it would have far-reaching commercial results, and would tend to promote the mutual interests of our Association, the Dominion and the Empire;

THEREFORE, BE IT RESOLVED, that the Reception and Membership Committee of the Association be authorized to consult the members of the Association at an early date and obtain their views regarding the same; further action to be determined by the Executive Council when the results of this enquiry are presented.

CONCLUSION.

In closing this report, your Committee desires to appeal to the members of the Association for a more active interest in enlarging the membership. Upon this work depends in large measure, the power and influence of the Association. The increased membership during the past few years has been followed by increased usefulness on the part of the organization, and so many benefits are now conferred upon members that every manufacturer in Canada should identify himself with the Association. Granted your assistance, the Committee hopes for a greater increase in the coming year than we have ever had in the past.

ROBT. CREAN, Chairman. — R. J. YOUNGE, Secretary.

A LARGER MEMBERSHIP WANTED.

Mr. Crean: Mr. President, in submitting the report I would like to add one or two words with reference to the importance of increasing the membership of the Association. We have increased our membership during the year by 246, which may be gratifying to some extent; but while the usefulness of the Association is increasing, the membership is not increasing in proportion. We should at least add to the membership this year 1,000. This organization should have not less than 3,000 members. The National Association of Manufacturers of the United States spends a large proportion of its funds to get new members. It cost them last year fully $29 a head for each new member. It costs us practically nothing; so, therefore, we have to depend not altogether on the officers of the Association, who are doing their duty, but upon the individual efforts of every member of the Association. If every member would guarantee to bring in one member we would have very soon three thousand members, with a very much increased means of extending our influence in other quarters. I know that members have said to me: "Well, what good is the Association to me?". I don't know what the gentlemen expect by investing ten or twenty-five dollars as members of the Association, but it is a question that ought to be answered, and so the Reception Committee this year intend printing a card, which will be issued to every member of the Association, showing what the Association has done, and giving grounds why we should ask a man to join the Association. We have good reasons and good value to give every member of the Association.

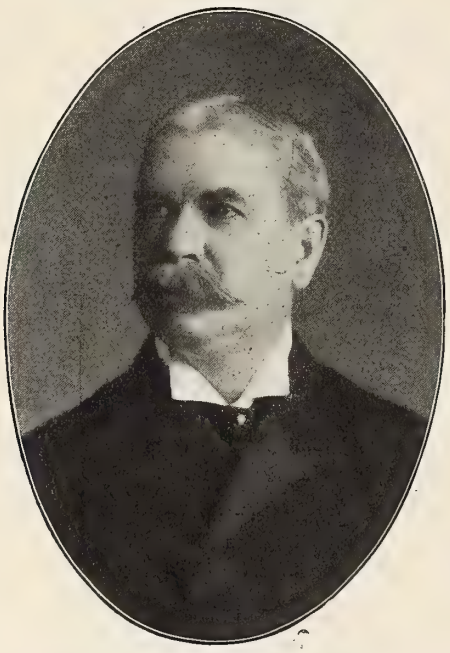
We have had only sixty-five resignations. The National Association of Manufacturers of the United States have about 10 per cent. of their total membership retiring every year; so that, taking it altogether, our membership hangs very well together. What we want is new members; and, gentlemen, I ask you, as Chairman of that committee, to give us your loyal and sympathetic support. I move the adoption of the report. (Applause.)

Mr. Murray (Toronto): Mr. President, I do not know whether anybody has been chosen to second that motion, but if not, I rise to do so, and I have a great deal of pleasure in attesting to the splendid work of this committee. I had the honor of being Chairman of the Reception and Membership Committee the first year of the re-organization, and afterwards when the committee was reconstructed the second year, and, therefore, I am able to speak of the hard work that devolves upon that committee.

What the Chairman says as regards our membership is a very important matter, and I think it would be a good idea, sir, if we would start a guarantee list that our members could sign before they leave this convention that they will guarantee at least one member each or pay ten dollars. (Laughter.) They will have a monetary interest in getting that member in. The Chairman referred to the National Association of Manufacturers of the United States. I don't know that it is known to the members of this convention or to our Association that the National Association of Manufacturers have reorganized after we reorganized our

Association, and they have reorganized on our lines, and, to show you we are doing good work, they are following our suggestion on the insurance question. We started it, and they are taking it up, and at Pittsburg they appointed a committee to follow it up. The secretary has been in correspondence with our secretaries to find out what we have been doing, and Mr. Cushing has also been in correspondence with myself.

They have in the United States, I think they estimate, somewhere about 80,000 manufacturers; they have only got 3,010 members. We have about 15,000 manufacturers, and we have got 10 per cent. of them members, showing that our manufacturers are appreciating to a larger percentage than the manufacturers of the United States their Association. That is pretty good evidence that our Association is doing good work; and when our members ask a manufacturer to join us, they need not be afraid that he will have any reason to be sorry he joined. I suggest, sir, in seconding the report, we get a guarantee from the members that they will bring in one member each.



ROBERT CREAN
Chairman Reception and Membership Committee, 1903-1905

EXCURSION TO GREAT BRITAIN.

Mr. Crean: There is one part of my report to which I did not refer, and which, I think, reference ought to be made to, and that is with reference to the proposed excursion to Great Britain. Not only would it be a pleasurable trip, but of immense advantage to the industries of the country. We all listened with a great deal of pleasure to the President's address last night, in which he made mention of the movement over there. I think we should have no uncertain sound on that; and I am satisfied from what I have heard, if the Association decides to take a trip to Great Britain we will have the best time it is possible for an association of this kind to have. We will be taken over by the best people in Great Britain; we will meet that apostle, Mr. Chamberlain; we will come in close personal touch with him, and there is nothing like meeting a man face to face. You can do a great deal by correspondence, but when you see a man face to face and hear his views personally expressed, it has a great deal better effect than any other means, especially newspapers and cablegrams. I would like some members of the Association to express themselves on that point.

The President: I may say with regard to the excursion, while I was in London the London members of the Chamber of Commerce tendered, on behalf of the London Chamber of Commerce, their services to make an excursion of the manufacturers of Canada to England a success from the time we land till we leave; and if the London Chamber of Commerce take that up they are able to make it a success. I believe a trip to England at the present time would give Canadians an opportunity to study on the ground the whole question of whether it is not going to be the best thing for Canada to tie up permanently with our kinsmen in the great sentiment—and he is a poor man who has no sentiment—that binds us to the greatest Empire in the world. I think it is time that we did get together and foregather as much as possible; and an excursion to England at the present time would be most opportune. Again I say, we would be received through the London Chamber of Commerce, which would give us an opportunity to get down to the bottom of things.

ITS FINANCIAL BENEFITS.

Mr. D. W. Robb (Amherst, N.S.): This suggestion of an excursion to Great Britain strikes me as one of the best things that has been proposed. I think the Canadian manufacturers, or a great many of them, are too modest in their ideas of what they can do in the way of foreign trade; and more than that, of course, every one knows, whether they realize it fully or not, that London is the centre of the foreign trade of the world to a very great extent, and you can get at the conditions and find out what may be done there better than anywhere else. Just in my own small experience I had the good fortune to get several foreign orders, and, although some of these orders came through New York indirectly, they came through London; that is where the business originated. We have no agent in London and no representative, but it came through London influence that originally was exerted from Canada. I could give a great many other instances. There are many manufacturers here who do business through London in South Africa and Australia, perhaps a great deal more than I do, but I know a great many instances even of small manufacturers in lines you would hardly expect who are able to get business right in London. The point about the thing is this, that Canadian manufacturers, like those of the United States, are, to a greater extent, specialists than they are in London in some particular lines, and for that reason I know there are many things in which we can compete with British manufacturers right on their own ground.

As I said before, we would get a better insight into the conditions, into the chances for foreign trade, by coming directly in contact with the middleman there, with the commission houses, etc., than we would in any other way. There are, of course, sir, the great benefits you have indicated yourself. We would come in contact with our brethren in the centre of our Empire, and that would be a great educational point. There is no question about the advantages of that. But I was speaking more particularly as to the direct benefit to our manufacturers themselves. I believe it would be very great.

ITS IMPERIAL BENEFITS.

Mr. Wilkins (Montreal): Mr. Chairman, when a manufacturer in this country has his samples ready to do business he does not write a letter nor publish in the local papers that he is doing business at a certain stand, and let that go to get his year's business; he sends from the Atlantic to the Pacific commercial men to meet the business men of the country face to face, and talk over his samples and what he has to sell with the customer that he expects to do busi-

ness with. If the Canadian Manufacturers' Association expects to do a foreign business, it is absolutely necessary, in my estimation, that they go or send somebody with their samples, to meet, face to face, the men with whom they expect to trade in the Mother Country or in foreign countries. (Hear, hear.) That is obvious, no doubt, to each and every business man; but the one point that I wish to express myself on in connection with the proposed trip to Great Britain is the one of sentiment which you mentioned, sir, a few moments ago, that it is a poor man who has no sentiment. The Canadian Manufacturers' Association and all the business men of the Dominion of Canada should be the best constituted body within the realm of Great Britain to preach the gospel of preferential trade, because this is the only colony that Great Britain has which has been founded and maintained upon the purest of loyalty to the British flag. (Applause.) Since the United Empire Loyalists chopped their homes out of the hardwood forests upon the banks of the St. Lawrence this country has maintained its loyalty to Great Britain purely and solely upon its loyalty and love of the old flag. As we all know, and what is not known so well by those in other parts of the Empire, we have been constantly courted by a very strong and handsome lover to partake of the good things he has to offer us, but on account of our loyalty to that old flag we have stayed under its folds, and with God's blessing there we will stay until the day of judgment. (Applause.)

I believe the business men of Canada can do more good to help that great apostle, Chamberlain, to obtain what he is preaching, to carry out that gospel of preferential trade better than any other people can. (Hear, hear.)

We know, of course, about our own country, and we know a great deal about the Empire in general, and we are able to go and tell the people with no uncertain sound, as our President did this year, and the other gentlemen who accompanied him—I am sure they did more in a visit to England than all the newspaper talk that we have, the pros and cons, one party saying we are in favor of it, and another party saying we are not in favor of it, with our Government at Ottawa pronouncing nothing substantial in reference to this matter. The people of Great Britain have an uncertain attitude in regard to this matter; whereas if it were possible for us to go over there as the Canadian Manufacturers' Association, and meet with the Boards of Trade of Great Britain and the business people and private citizens, and tell them we have "both hands on the Union Jack," and we intend to keep them there, and that we want preference with them, and with them only, it would be of very great benefit.

I feel quite convinced that this is one of the best ideas that has ever originated in the Association, and I sincerely trust that those members of the Association who are able to do so will endeavor to carry out and be the apostles of preferential trade in the British Empire.

CANADA'S LOYALTY.

Mr. Robert Munro (Montreal): The acceptance of the resolution which has been moved and seconded involves a general acceptance of the suggestion of such an excursion as that at present before us. The detailed acceptance will be asked for by the Executive, and the subject then decided upon one way or the other. The reasonableness of the suggestion of an excursion to Great Britain I think must be apparent to most of us. We have learned more or less of the work of our President there, and it appears plain that a general excursion would follow up that work to very great advantage.

One reason only I am going to suggest that appears to me is this, that we find still, notwithstanding all that our friends in the Old Country are learning of Canada —and the greater acquaintance they have with it the more they realize its proximity is much greater than they have thought—they still overlook and question in their newspaper discussion the loyalty of Canada in the matter of the Imperial defence. We are twitted with a spirit of pettiness, which really we have disclaimed, but which has never been acknowledged fully in the English press. The Boards of Trade of this Dominion from the Atlantic to the Pacific, meeting two years ago, decided clearly and distinctly in favor of an important contribution towards the defences of the Empire. That was never endorsed by our Government, and consequently the press of England is writing in a very hesitating tone as to whether we are sound on that point.

It would be of great advantage to this country that the manufacturers should, by sending a large delegation and some of our leading members, make no uncertain sound in regard to the fact that we realize the value of insurance on our ocean traffic as the result of being under the British flag, and we are willing to pay a fair contribution, as Australia has done for so long, towards the maintenance of that defence. I think the putting right of that point, which is cast up in some papers from time to time would of itself justify such a discussion as has been given on the report of Mr. Crean, and I would heartily recommend the adoption of it.

Mr. P. H. Burton (Toronto): I have been over to England, as you know, a few times, and I think not only would the manufacturers of this country be benefited perhaps in selling their goods, but they might find that although we think John Bull is very slow, we might be able to learn something there if the excursion were organized in such a way that the different trades were brought into contact with the similar trades in England. I am quite sure that the English manufacturers there would take them by the hand and show them everything that was to be seen. The consequence would be a very friendly feeling towards Canada.

Now, we talk about the large quantities of goods imported from the United States—manufactured goods. I believe if the Canadian manufacturers and the people of Canada generally knew as well the English market as they do that of the United States, that we should buy a great many more goods in Great Britain and a great many less in the United States. I think from every point of view an excursion of that kind would be very desirable, and I believe very successful.

Mr. Thomas (Toronto): A remark was made about the support of the British Navy. It may not be generally known to the members that the Australian Government pay £200,000 a year towards the support of the British Navy, whereas Canada pays absolutely nothing.

Mr. C. C. Ballantyne (Montreal): Mr. President and Gentlemen,—As the ground has been so fully covered by the preceding speakers, I wish only to say a very few words and to happily endorse the suggestions that have been thrown out that the Canadian Manufacturers' Association visit Great Britain. We are all very much interested in the Hon. Joseph Chamberlain's policy, and I think there is nothing that would more strengthen the hands of Mr. Chamberlain and bring about an understanding along Mr. Chamberlain's lines to weld the colonies and Great Britain together, than if the C.M.A. were to undertake this trip in 1905. I very heartily endorse it and hope it will be carried through.

The President put the motion to adopt the report, which on a vote having been taken, was declared carried.

The President called for the report of the Commercial Intelligence Committee.

Mr. A. W. Thomas, (Toronto), Chairman of the Committee, presented the report, which was received with applause. It was as follows:

REPORT OF THE COMMERCIAL INTELLIGENCE COMMITTEE

Your Commercial Intelligence Committee is pleased to report a year of increased activity and usefulness.

We regret that the export trade of Canada has not shown an increase during the past year. Why it should have decreased is difficult to explain, particularly with regard to the Mother Country, since Canada is more and more becoming prominent as a source of supply. That she is taking a leading part in establishing closer connections with other parts of the Empire, and her trade relations with foreign countries continue to be friendly, are conditions that must be viewed with satisfaction.

Eleven well attended meetings of this Committee have been held during the past year. Among the many important questions which have received consideration, the following may be mentioned:

CORRESPONDENT MEMBERSHIP.

While the manufacturers of Canada have been particularly busy with the demands of the home market, many of them are now looking towards foreign fields, and others, who have already established themselves in foreign markets are expanding, and introducing their products into new territories. They find themselves, in many cases, handicapped by being unable to obtain detailed information in markets where Canada and its organizations are not represented. It is difficult to estimate the disadvantage of the Canadian producer, when compared with his United States competitor, who has at his service a complete system of Consular agents, each one of whom is a trade representative ready to assist the manufacturers of the United States.



A. W. THOMAS
Chairman Commercial Intelligence Committee, 1903-1904

Canada has now fourteen Government commercial agents in as many foreign countries, and some of them are doing commendable work. But the system at best is fragmentary and in many cases the representatives should have a more intimate knowledge of the products of Canadian factories if they are to render valuable service to the exporters of the Dominion.

During the greater part of the year, your Committee has had under consideration the reorganization of the incomplete system of foreign representation through which the Association has been endeavoring to serve its members. Thorough investigations have been made, and it has finally been decided to organize a system along the lines adopted by the Philadelphia Commercial Museum, which is the greatest independent institution of its kind in the world.

The preliminary organization in connection with this work is now under way. Correspondents will be first appointed in the more important markets and the field may each year be widened by increasing their number, and gradually covering all the markets of the world. Many of these correspondents will be appointed on a reciprocal basis. Others, where no important service can be rendered by the Association in return, will be remunerated according to the information supplied. All reports will be secured through the Association offices and will be treated as confidential for the use of enquiring firms.

In view of the fact that Canada's export trade is gradually increasing, and that this important extension of trade is being recognized by the Government of Canada in the appointment of commercial agents, we beg to submit the following resolution to be forwarded to the Dominion Government:

THAT WHEREAS, Valuable markets for Canadian products are to be found in many parts of the Empire and in foreign countries, and it is desirable that Canada should be represented in these markets,

THEREFORE BE IT RESOLVED:

(1) That the Dominion Government should be urged to extend its system of commercial agencies;

(2) That the representatives appointed should be active, energetic business men with a wide knowledge of Canadian products, raw and manufactured;

(3) That they should be recalled at least once in three years in order to visit the leading exporters in Canada, and to keep in active touch with the progress of Canadian industries.

THE METRIC SYSTEM.

This important subject has received the close attention of your Committee. Its importance must be admitted in view of the fact that a bill to legalize the system as the standard in Great Britain was recently carried through the British House of Lords and that the Canadian Government has recently given some thought to its introduction in Canada. A detailed enquiry made by this Committee among the members of the Association, shows the following results:

Enquiries issued	1,427
Replies received	493
In favor of adoption of the system	219
Against the adoption	225
Indifferent to	49

This would indicate that a majority of the members are not at all interested in the question. Of those who replied the greater number opposed it, and the views of these must receive due consideration. In any case, the results of this investigation lead your Committee to recommend that this Association should not endorse the adoption of the system in Canada unless it is simultaneously adopted in the British Empire and in the United States.

DISTRIBUTION OF TRADE INDEX.

Your Committee is pleased to report the successful distribution of the last edition of the *Canadian Trade Index*. The British Consuls and important reference libraries in all parts of the world were forwarded copies. Particular attention was paid to the distribution in the British Isles and the British colonies, and copies were forwarded to leading importers in every foreign market of the world. These are highly valued by importers and have been received everywhere with expressions of praise.

It is with great satisfaction that your Committee are able to report that largely through the distribution of the *Trade Index*, more than 2,500 specific enquiries for Canadian goods have been distributed to the members of this Association during the past year. In a large number of cases, these have resulted in the securing of substantial orders. We have no doubt also that in many cases enquiries have been forwarded direct to the manufacturers, of which we have no record.

JAPANESE TARIFF.

Your Committee learned with some surprise that the Japanese Government extends favored-nation treatment to Great Britain, and other leading nations, and that Canada not being a party to these treaties, is so severely discriminated against in several branches of manufacture as to prohibit trade. In the majority of these articles, however, Canada is not now able to compete, but your Committee called the matter to the attention of the Government, and it was made the subject of special enquiry. It is ascertained that the existing treaties will not expire till the year 1911, and that, in the meantime, the Dominion Government are not favorable to accepting the terms of the present treaty, so that there is little hope of having the discrimination removed.

NEW ZEALAND TARIFF.

On November 19th, 1903, the New Zealand Government adopted its first preferential tariff according a preference to goods of British origin. Canada will benefit materially by its adoption, and no efforts were spared to place all the details before the members of the Association without delay. It is noteworthy that these details were first given to the Canadian public in complete form in the columns of *"Industrial Canada."*

POSTAGE CHARGES ON NEWSPAPERS AND MAGAZINES ENTERING CANADA.

It was called to the attention of your Committee that the remarkable increase in the circulation of United States magazines in Canada, compared with those of British origin, is due in part to the fact that the rate on such mail matter from Great Britain is 8 cents per pound, while the rate from the United States is only 1 cent per pound. As this class of mail is not carried within the British Islands for less than 8 cents per pound, it was deemed that no action could be taken until the British Parliament had first taken steps to reduce the local rate, and we regret to learn that the Postmaster-General in Great Britain has recently pronounced this to be an impossibility.

PARCEL POST TO COUNTRIES SOUTH OF THE UNITED STATES.

A strange condition came to the attention of your Committee in the fact that the United States Government refuses to carry parcels by mail from Canada to countries south of the United States, such as Mexico and Cuba. As parcel postage arrangements beyond the province of the Postal Convention must be arranged between individual governments, your Committee regarded any effective action as impossible, beyond placing the matter before the Dominion Government for their consideration.

Your Committee is also continuing its request made last year for a parcel post between Canada and Trinidad.

ADMISSION OF UNITED STATES CATALOGUES THROUGH THE MAIL.

Having discovered that considerable quantities of catalogues advertising foreign goods on sale in the Canadian retail trade from the United States were being mailed to Canadian consumers and in many cases were entering without payment of duty, your Committee brought the matter to the attention of the Dominion Customs Department, and were rendered every reasonable assistance. The present customs law distinctly forbids the free entry of these catalogues, and every reasonable means will be adopted by the Association to secure the enforcement of the law.

TRADE WITH SOUTH AFRICA.

Canadian manufacturers interested in the South African market are indebted to Sir Alfred Jones, of the Elder-Dempster Co., for his generosity in providing space upon the steamship "Monarch" for exhibits to be shown in all the important South African seaports. It is to be regretted that a larger number of Canadian manufacturers did not take advantage of the offer, but this was due in almost every case to the short notice and the impossibility of preparing individual exhibits.



A. S. ROGERS
Chairman Commercial Intelligence Committee, 1904-1905

BRANCH OFFICE IN LONDON.

For some years past it has been apparent to this Association that Canadian exporters are annually losing a large amount of trade, and are also at an inconvenience owing to the fact that there is no special Canadian Trade Office in London. This will not be understood as casting any reflection upon the splendid service performed by the High Commissioner for Canada. What is required is a Canadian building centrally located, providing space for the exhibit of Canadian products and under the charge of a competent Canadian, who will be at the service of Canadian business men in providing them with any information desired, and furthering the sale of their products, not only in Great Britain, but in other countries.

More than two years ago, this Association presented the case to the Dominion Government, and a preliminary grant was made for the establishment of such a building, but we have yet to learn that any further steps have been taken.

Your Committee decided to ascertain the opinions of the members with regard to the matter, and, in response to a circular enquiry, we found that a considerable number of the members are in a position to take advantage of any facilities which might be provided, and are earnestly desirous of proceeding with the enterprise. A special committee was appointed to bring the matter before the Dominion Government, and may be expected to report to this convention.

OTHER MATTERS.

Other matters dealt with during the past year are as follows:

The securing of a uniform Civic Holiday in Ontario.
Parcel Post between Canada and the Barbados,
Japanese Trade Mark and Patent Act,
Cape Town Exhibition.

A USEFUL DEPARTMENT.

In closing this report, your Committee begs to call to the attention of the members the facilities provided for their benefit in the office of the Association in connection with this department.

Reliable information, respecting any branch of industry in any country, will be secured for them with all possible speed at a minimum of cost; commercial reports upon firms in any part of the world will be secured on short notice at a cost of $1.50 each; letters in any foreign language will be translated and returned by the next mail, and any kind of commercial intelligence desired will be secured.

It is the desire of the Committee that these facilities will more and more be used by the members, many of whom have yet to realize how useful the department may be to them.

The Chairman of the Committee desires to express his thanks to the members of the Committee, who have so faithfully assisted him in making the work of the year so pleasant and profitable.

All of which is respectfully submitted.

ARNOLD W. THOMAS, Chairman. R J. YOUNGE, Secretary.

UNIFORM CIVIC HOLIDAY.

Mr. Thomas: I have much pleasure in moving the adoption of the report.

Mr. R. Hobson: I second the report, Mr. Chairman. Before that motion is put I would like to ask one question under the heading of "Other Matters," and that is the question of securing universally a Civic Holiday in Canada. When this Committee had that matter in hand I hoped they intended to recommend that that universal holiday should be Monday, and I think great pressure should be brought to bear upon the Government to have such a public holiday on Monday. The manufacturers are deeply interested in this matter, and we all know that when a holiday comes at the end of the week it is a very hard matter indeed for us to get our men back to work probably before the beginning of the next week, whereas, if it were on a Monday, they have Saturday afternoon, Sunday and Monday, and they have a chance to have a good time and to come back to work Tuesday morning in good condition. I think that should be kept fairly before the Committee interested in dealing with this question.

Lt.-Col. Gartshore, (London): I beg to differ from Mr. Hobson as to a Civic Holiday or any other holiday. I think it ought to be on a Sunday—(laughter)—there are altogether too many holidays, and if anybody will sit down and figure up for a moment the immense amount of money that is lost by holidays I think it would stagger them. The Government have set aside some useful holidays, such as Thanksgiving Day (on which very few people give thanks); and the men very often when they wish to work have to lay off, and I think the Manufacturers' Association should take no part in increasing the holidays.

Mr. Hobson: I didn't ask for holidays; I quite agree with what the gentleman has said, but when we do have a holiday, do not let us have it in the middle of the week.

Mr. W. K. George: We quite agree with Colonel Gartshore's remarks with reference to too many holidays, and with Mr. Hobson's idea that something should be done to arrange for a uniform Civic holiday, but we also realize that the question is beyond our jurisdiction or beyond the jurisdiction of Provincial Governments. These civic holidays are arranged for by the municipalities for their own special purpose at whatever time suits them best, and it would require, I think, some concerted action on the part of the towns and cities to decide on one day if they thought best. I doubt if they will do that. We all know that civic holidays are to a very considerable extent used for the purpose of interchanging visits, you might say, between different towns and cities of the Province, and to hold that function on one day throughout the Province would largely prevent that use being made of it. The Committee felt when this question was brought before them that it was beyond their jurisdiction, much as they might wish to see the number of holidays curtailed, and a detriment to business done away. I don't think we can do anything in connection with it.

Mr. Kilbourn, (Owen Sound): I quite endorse the remarks of the last speaker. There are many industries, such as that with which I am identified, to which holidays of any kind are a nuisance. Our plants must run continuously, and to multiply the number of days that people may get off, is, we consider, a great nuisance. I think that the remarks of the last speaker in the matter of our authority or jurisdiction are quite applicable. The fact is that these holidays are used generally, as it is said, to interchange visits with the neighboring municipalities, and if you have all the people enjoying themselves on the same day you destroy the benefits which are derived by these interchanges. I think the Manufacturers' Association should go slow in the matter of increasing the number of holidays.

EXPORTS AND THE METRIC SYSTEM.

Lt.-Col. Burland, (Montreal): I would like to say in connection with the pronouncement that has been made by the Committee on the Metric System, that we hear a great deal about export trade. In this connection it seems to me inadvisable for the Committee to take any definite position on this subject. If we are going to do an export trade, we must speak in an export or commercial language. This Metric System has been adopted by all leading countries, except Russia, Great Britain, the United States and Canada, and it seems to me this Committee or the incoming Committee should keep this matter well in mind. We have a detail here of the number of enquiries made and the number of replies received. I presume in many cases the question of weights and measures did not interest some of the members of the Association, and silence usually is taken as consent. It seems to me the incoming Committee should take such steps to further ascertain the opinions of the members as is necessary under the circumstances. Many of the members of course would be apt to say the Metric System was not necessary, that they should not adopt it. This arises to a certain extent from the fact that a certain expense is involved in the changing of measures and dies and the equipment of the different shops. The great question is whether we would or would not get a corresponding value from a small expenditure in each of our factories to induce this system.

Mr. Thorn, (Toronto): In the preparation of this report, there is one important item that I think was inadvertently overlooked, perhaps, and that is the fact that from the first of July this year a new Act came into force in Cape Colony whereby the Canadian manufacturer of goods can now enter enter that country at a reduction of twenty-five per cent. on the duties charged foreign competitors.

Mr. Burton: What are those items against which Canada is discriminated under the Japanese tariff?

Mr. Thomas: I am not able to give you the particulars. Mr. Younge has the tariff; it is a very long one and contains almost every item of manufactured goods.

Mr. Burton: How much is the discrimination?

Mr. Thomas: About 33 1-3 per cent., I think, a very heavy discrimination, indeed.

Mr. VanBever, (Toronto): Again referring to the Civic Holiday question, I would like to find out if it would not be possible for the Association to procure a list of the dates of the various Civic Holidays so that we could keep our travelers out of the cities on those dates. I believe almost every one of us has received letters from our travelers stating they were unable to work on that day on account of the stores being closed. If the Association could procure the data and that could be furnished to the salesmen, the men could be instructed to keep out of the various towns.

Mr. George: If my recollection is right, the question was taken up by the Committee and the intention was to deal with it in the way that has been suggested. Whether it might be better for the Commercial Travelers' Association to take that up, if it comes directly under their supervision, is, I think, open to suggestion.

LONDON OFFICE.

The President: It seems to me it would be a good thing for us to lessen the holidays and make them uniform if possible. With regard to the Metric System, I was very glad to hear Colonel Burland speak of that. If we are going to do a foreign business, we will have to meet the methods of the people to whom we go to do business. We will have to again bring that question up because I do not believe the manufacturers in Canada who have replied to that circular that was sent out have thought about what they were doing.

There is another point with regard to a branch office in London. I do think we ought to have that branch office as soon as possible. I want to say when I was in London, one of our leading Canadians, now resident in London, came to me to say they had a little conference in the City of London among men deeply interested in the welfare of Canada, and they were prepared to appoint a Committee of five or six leading Canadians in London to assist the Canadian Manufacturers' Association as an advisory body in the development of business with the great Mother Country. If we do establish a branch office in the City of London, I think that is worthy of consideration when you come to it.

EXPENSE OF METRIC SYSTEM.

Mr. Robb, (Amherst, N.S.): I think the report of the Committee on the Metric System is just about right. I think they have done just what they should do in not taking any decided action. What I wish to say is perhaps on behalf of those opposed to the Metric System. I think that part of it is not very well understood by a great many manufacturers. Of course it is a natural feeling, I suppose, on the part of anyone, who is not deeply interested, that the Metric System is an improvement, that it is a modern system which is in use largely in Europe, and which eventually will be here, perhaps, but I think there is no harm in those who are not either interested or in favor of it in understanding the attitude of those opposed to it a little better. The main question is the expense, and that is a question which is not very clearly understood. Those who are opposed to it are not opposed of course to the system being adopted by as many people as want to adopt it or for whose advantage it is, but they think it should be left free; that is, the Government should not make compulsory or legalize it in a way that would compel manufacturers to adopt it. In our particular case, we happen to be in a class of manufacturing where it is really a very serious matter. I mean, for instance, in the manufacturing of machinery where gauges and patterns are used entirely for duplicate work. We have a great many thousands of dollars invested in that class of plant which costs a great deal of money, and not only that, but there are shop drawings and all that sort of thing. If you go into it you will see we could not very easily transfer to the Metric System. For instance, probably we want to make so many elevators or something of that sort. We cannot do it; the measurements do not come out evenly. It means you have to destroy the whole thing, revise it, and make it all over. Of course for foreign trade, we might be driven to do some of that as some of the American manufacturers have been, and in some cases they have been driven to have both systems. But our claim is it should be left entirely optional with the manufacturers themselves to do that if they find it necessary. This large expense should not be imposed arbitrarily upon them. I would like any manufacturer or anyone who is interested in the subject to look up the publications of Mr. F. A. Halsey, one of the editors of the American Machinist. He has published very voluminous reports on this subject, and it is through that opposition very largely in the States that it has not been legalized there to a greater extent. It is really a very serious matter with certain classes of manufactures. I simply ask for fair play.

Mr. Thomas: The Metric System of course is a matter that might be discussed probably for hours, and if one had more time they could go into it more fully. Just on the line of expense, I would like to tell the convention that the American Association of Manufacturers have recently sent out an enquiry to their members, in the month of April last, I think, along the same lines as we did, and a very large majority of their manufacturers are opposed to the introduction of the system. One of the questions asked was, what would be the expense in their particular industry, if the system were made compulsory? Seventy-one members expressed their cost in dollars, and these seventy-one added together made, I think, $2,800,000. The cost of changing to the Metric System is simply appalling if a person goes into it carefully. It is really not properly understood.

Mr. W. B. Tindall, (Toronto): I quite agree with what Mr. Robb has said, both from my own experience and what I have seen. There is one passage here which has not been touched upon and which I think every manufacturer who employs a very large number of skilled mechanics will fully realize, and that is that in any change of this kind it would be utterly impossible for any Legislature to pass compulsory legislation to go into effect immediately. You have to bear in mind that not only is the expense very great, but you have your skilled workmen who are using the measures and gauges that they are now accustomed to. It would take them some time before they could intelligently and accurately use the new system for measurements, and I question very much with a great many of the laboring men if they would ever master it. You must consider that point. You take an artizan who is very skilled, who has always been used to measuring by inches and so on, and you give him a drawing to work from upon which he would have to use measures of this kind. You will find that there is an intellectual process he will have to go through in his mind that will considerably retard the speed with which he would do his work, and it would take him some time before he adapted himself to the new condition of things. Of course with the new generation coming up and younger men who learn their trade and use this measure, that would not apply so much, but I think it would take some time before it could be successfully put into operation. Take those two things together, the adaptability of your workman and the expense of it, and I think certainly the Association should go very slowly and look into it very carefully before any pronouncement is made upon the adoption of it.

The President: I think we are pretty well agreed that we want to go slowly on all these changes. We want to educate the young people to this system. We want to keep on investigating it and not turn it down off-hand.

The President put the motion to adopt the report, which on a vote having been taken, was declared carried.

The President: I will ask Mr. George A. Howell to present the Industrial Canada report.

Mr. Howell presented the report, and in moving its adoption, said: I may say I regret very much that our Chairman, Dr. Smale, could not have been here. He has been a very efficient Chairman during the year, and our Committee regret that it is impossible for him be present.. The report is as follows:

REPORT OF THE INDUSTRIAL CANADA COMMITTEE

Your Industrial Canada Committee has pleasure in reporting a year of steady progress in the work of the Association's official organ. Eleven well attended meetings have been held, and a keen interest has been taken by the members in promoting the welfare of your paper.

SPECIAL FEATURES.

During the past year a number of new departments have been established, which now form regular features of every issue. In September a column of Industrial Activities was begun. In December a page was reserved for the discussion of Labor questions. Since the inauguration of the Transportation Department of the Association, timely articles have appeared from month to month, dealing with matters of current interest to shippers. A department for Foreign Trade News, distinct from Trade Enquiries, was commenced in January; Scientific Notes was added in March, and in May a series of illustrated biographical sketches was begun, outlining the careers of prominent Canadian manufacturers.



F. J. SMALE, PH.D.
Chairman Industrial Canada Committee, 1903-1904

No effort has been spared by your Committee to improve the typographical appearance of Industrial Canada. Illustrations have been used as freely as the limited earnings would allow. The old cover design was replaced in April by a new one of much simpler effect, while at the same time the page was changed from three columns to two. The brighter cover paper first used with the May issue has added much to the general appearance of the paper, which now, without doubt, is one of the most attractive published in Canada.

EDUCATIVE INFLUENCE.

Through the medium of Industrial Canada, members have been kept regularly informed of the Association's work, as carried on by the Executive Council and by the various branches and committees. In addition to this, however, your Committee has not lost sight of the policy, adopted some two years ago, of broadening the scope of the paper so as to make it more fairly representative of the industrial life of the whole nation. To this end a number of special articles have been published during the year, including the following: "The Practical Value of Cost Accounting," "The Climate of Canada," "Electric Power Development at Niagara," "The Piano and Organ Industry," "The Metric System," "Trade with the British West Indies," "The Portland Cement Industry," "British Silk Manufactures," "The Boot and Shoe Industry," etc., etc.

Due prominence has been given to reports of the various banquets held under the auspices of the Association, while special numbers have been issued containing full accounts of the Annual Convention of 1903, and the Pacific Excursion. The editorial columns have outlined the attitude of the Association towards many of the leading questions of the day, and have prosecuted with increasing success the educative campaign in favor of tariff revision, and a preference for "Made in Canada" goods.

SIZE AND CIRCULATION.

In size and circulation, Industrial Canada has continued steadily to grow. Volume IV., which was completed with the July issue, contained in all 608 pages, being 60 pages more than Volume III. and an average of more than 50 pages per issue. Of this total, 453 pages were reading matter and 255 pages advertising. The increase in circulation has been quite remarkable. In 1903 the total number of copies distributed was 36,100, or something more than 3,000 per month. During the past year the gross circulation was 49,600, a monthly average of 4,133. It is now received regularly by all members of the Association, leading Boards of Trade and Public Libraries throughout Canada, members of the Senate, the House of Commons, and the Provincial Legislatures, Domestic and Foreign Exchanges, Foreign Chambers of Commerce, British Consuls, Commercial Agents of the Government, and miscellaneous subscribers at home and abroad.

FINANCES.

Notwithstanding the additional cost of publication, due to increased size and circulation, the paper has continued to justify itself as a financial undertaking. The receipts from advertising and circulation during the past year have grown in proportion as the paper has developed along other lines. The small deficit of $102.39, referred to in the Treasurer's Statement, would be more than wiped out by an appropriation from the General Fund of ten cents per member. In other words, each member's subscription for the past year has cost the Association less than ten cents. Your Committee has felt, however, that the value of Industrial Canada as an advertising medium was coming to be so widely recognized that even this slight drain on the Association's finances was quite unnecessary. Accordingly, in May last an advertising solicitor was appointed. Since then contracts have been turned in for over $1,600 of new advertising and $400 of renewals. It would seem, therefore, that with a little persistent effort the receipts from the paper might be largely increased, so that the outlook from the financial standpoint is most encouraging.

The members are no doubt aware that up to the present time the advertising field of the paper has been confined entirely to Canada. Your committee is of the opinion that the time has arrived when the Association might discuss

the advisability of opening its columns to and increasing its circulation among British advertisers in other parts of the Empire. Without making any recommendation in this matter we desire to learn the views of the members.

INCREASED USEFULNESS.

The present status of Industrial Canada among Canadian publications is a matter of which your Association may well feel proud. As the mouthpiece of such an important organization, it carries a weight possessed by almost no other paper, and the frequency with which it is quoted or referred to testifies to the esteem in which it is held by the press at large. Its present success is due in no small degree to the practical assistance of those members who have patronized its advertising columns, and to all such your Committee desires to extend its warmest thanks. It should be remembered, however, that assistance in the way of contributed items and advice is also necessary if it is to continue to develop in the future as it has in the past. It is only through co-operation of this sort on the part of members generally that Industrial Canada can attain its fullest degree of usefulness. Its columns are at all times open to members for the insertion of interesting news items or for the discussion of matters pertaining to the industrial welfare of the country. It is earnestly hoped that during the coming year this privilege will be freely taken advantage of, and that every encouragement will be given to your new Committee to prosecute the good work of the Association's organ.

F. J. SMALE, Chairman. R. J. YOUNGE, Secretary.

Mr. Burton: I would like to second the adoption of the report, and I would like to make a suggestion in regard to increasing the advertising field outside of Canada, and that is, if copies of the English trade papers were obtained and a copy of Industrial Canada sent to the advertisers in these papers, with a price for advertising or something of that kind, I think quite a large amount of business could be got.

The President put the motion to adopt the report, which, on a vote having been taken, was declared carried.

COMMUNICATIONS.

The President: Before we close, I am going to ask the Secretary to read the communications he has just received.

The Secretary: A letter from Mr. George Hadrill, the Secretary of the Montreal Board of Trade, inviting the delegates to visit the new Board of Trade Building; an invitation from the Shawinigan Water and Power Company to visit Shawinigan Falls. We have also received a suggestion from the District Trades and Labor Congress of Toronto that a conference should be held between the representatives of the employers and the employees of this country, as represented in the two organizations, to arrive, if possible, at some solution of the differences which arise between these interests from time to time. At a meeting of the Nominations and Resolutions Committee of this Association, held last night, this suggestion was accepted with pleasure and arrangements will, we expect, go forward for such a conference. (Applause.)

An invitation has also been received from the Canadian Pacific Railway to inspect the new Angus Car Shops, in Montreal; a letter has also been received from the Rev. T. Albert Moore, of the Ontario Lord's Day Alliance, with reference to a deputation to wait upon the convention to represent the Lord's Day Alliance. This invitation has been received at a very late date; it only arrived this morning although it is written from Toronto on the 19th September. It was the opinion of the Nominations and Resolutions Committee, after looking over our whole programme, that it had come in at such a late date that it would be almost impossible to arrange for a hearing, but it is presented herewith to the convention.

The President: Would any gentleman like to speak to that?

Mr. J. M. Taylor (Guelph): I suggest it be referred to the Vice-President of this Association.

Mr. Munro, (Montreal): I am sure we would all be willing to hear any short argument by the gentlemen representing the Lord's Day Alliance. We are all men who desire to respect the Lord's Day. There may be some among us that want a little quickening. However, I don't know whether there would be any time at the close of the afternoon session today; that is the only possible opening there may be. I would suggest, if it is agreeable to you, that these gentlemen be invited to come at the close of the conference this afternoon, and I would move to that effect.

The President put the motion, duly seconded, to receive the deputation from the Lord's Day Alliance at half past four this afternoon at the close of the business session, which was carried.

11.45 o'clock a.m., adjourned till 2.30 o'clock p.m.

At 2.45 p.m., the President called the Convention to order and called for the report of the Railway and Transportation Committee.

Mr. J. O. Thorn, Chairman of the Committee, presented the report, which was received with applause.

REPORT OF RAILWAY AND TRANSPORTATION COMMITTEE

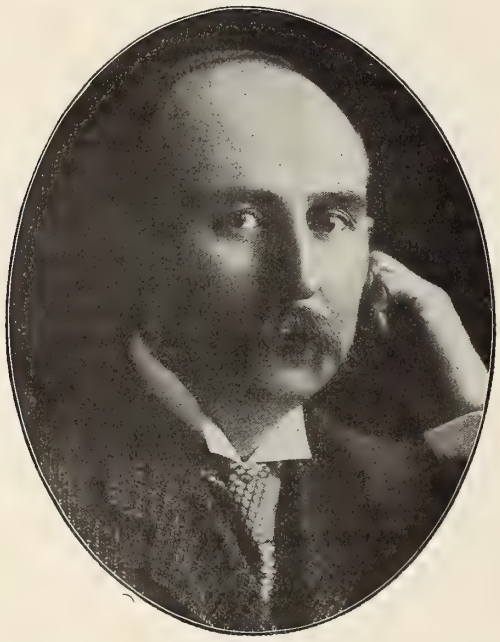
The Railway and Transportation Committee has pleasure in laying before the Association the report of another very successful year (if not the most successful year) of this department of the Association work.

The report to the last annual meeting laid emphasis upon the growing interest manifested, on all sides, in the question of transportation—an interest displayed by the number and nature of the bills laid before the House of Commons during the period covered by that report and the dissatisfaction frequently expressed by members of the Association respecting certain phases and conditions of transportation. This interest has not abated. It has become intensified. The necessity of a more general knowledge of transportation conditions and their importance as a factor in our national development are becoming more and more impressed upon the business community. The almost daily discussion of our transportation problems in the newspapers and elsewhere assist to bring home the importance of making transportation a subject of careful thought and attention.

While this country enjoys the advantage of a natural system of waterways penetrating to the heart of the continent, and while it possesses what may in time be recognized as another outlet for the surplus products of the far West (the Hudson's Bay route), of the former it cannot be said that it is at present being utilized to the reasonable limits, and of the latter, the Hudson's Bay route, we have little accurate information. The Government in endeavoring to remedy these shortcomings, appointed a transportation commission, composed of men of sound judgment and broad practical experience, to enquire into the development of our transportation outlets. This Commission, composed of Mr. John Bertram, of Toronto; Mr. Robt. Reford, of Montreal, and Mr. E. C. Fry, of Quebec, has already held numerous sittings in various shipping centres throughout Canada, and has amassed an amount of pertinent and valuable information. The attitude of the Government with respect to this branch of the transportation question is commendable. The Grand Trunk Pacific Railway is now assured and the con-

struction of branches and feeders for the existing trunk lines has been resumed after a period of comparative inactivity. These all promise and foreshadow a development of the country, which, while it cannot be accurately estimated, must be great.

The general increase in the cost of living has been followed by the usual demands upon the railways from their various employees for increased wages. The same reason has increased the expense to the manufacturer and others filling the requisitions of the railway companies for various materials and supplies. These facts have furnished the railways with a never failing argument for advancing rates. Where an increase in revenue is justified by these or other conditions, no reasonable opposition can be advanced—and by this Association no opposition will be advanced—to any legitimate effort on the part of the railway companies to obtain fair returns from their operations. These conditions, however, that have so often been urged of late to justify increases in rates are in the opinion of your committee, to some extent, merely excuses for imposing an unfair tax upon the manufacturing and shipping communities.



J. O. THORN,
Chairman, Railway and Transportation Committee, 1902-1904.

When complaints are made to the railways of the injustice done to a manufacturer and the serious results threatened to his business by these increases, the attitude of the railways seems rather to show a desire to sustain the reasonableness of their action than to make full allowance for the position in which that action threatens to place their manufacturing patrons. Now, more than ever before, these difficulties between the apparently conflicting interests of the shipper and transportation company have emphasized the necessity of a court of arbitration for such disputes. The Railway Commission, referred to in our last report, is now in active operation. Its inauguration is not only one of the most important events of the year in the sphere of transportation, but marks what we believe to be a new epoch in the railway progress of the Dominion. This Commission has already succeeded in impressing the community, by the reasonableness of its decision and the despatch with which its operations are conducted, of the advantage and absolute necessity to the community of such a body.

The United States with a greater variety of transportation problems to be solved, have taken the lead on this continent in the regulation and control of railways, and the interpretation of the responsibilities of transportation companies. There is not only the Federal Railway Commission which deals with interstate commerce, but each individual state, as a rule, has its State Railway Commission for these purposes. The larger manufacturers and shipping corporations have also for some time past made the practice of employing traffic managers to supervise the transportation of their supplies and products and conduct their general relations with the railways. As a result of the deliberation and operations of these trained officials, remarkable results have been achieved and various valuable practical theories have been evolved with respect to transportation. These theories are rapidly becoming the basis of the relationship between the manufacturer or shipper and the railways. They do not threaten or prejudice the financial interests and standing of honestly financed and honestly conducted railroads.

Some of these theories are mentioned hereunder because the principles they enunciate are essentially sound:

1. That rates shall be, with qualifications, what the traffic will bear.

2. Into the consideration of what the traffic will bear the cost of manufacturing or preparing freight for transportation must be a factor.

3. That the Railway Company in making rates is not to look on the proposition entirely from its own standpoint, but must consider what the service to be performed is worth to the manufacturer or shipper.

THE NEW DEPARTMENT.

At the last Annual Meeting, this Committee urged the necessity of securing the services of an expert Transportation Officer who should advise and represent the members in their efforts to secure equitable rates and conditions. The need of a Department directed by such an officer has been apparent for some years, and its inauguration at the present time has been rendered doubly necessary by the appointment and early action of the Canadian Board of Railway Commissioners.

The Association having approved of the Committee's recommendation, the new department was organized on the 1st of December last, the position of manager being offered to, and accepted by Mr. W. H. D. Miller, then chief clerk in the office of the Assistant Freight Traffic Manager of the Canadian Pacific Railway. How fortunate was the choice of your Committee, is shown by the results already achieved.

ITS POLICY.

The members of your Committee have kept in close touch with the new officer, and, in conjunction with him, have laid down the broadest and most reasonable lines in directing the policy of the Department. The carrying out of this policy during the past nine months, has proved the value of the Department not only to individual manufacturers, but in bringing the influence of this powerful Association to bear in the solution of national transportation questions, which affect the trade of the whole Dominion.

ITS FUNCTIONS.

The experience of your Committee up to the present time has shown that the Department, while watching the general interests of the Association, must be, with respect to individual complaints, largely advisory. In this direction much good has been accomplished, and members have been advised of their rights in the various cases. It is thought

advisable, owing to the practice in the past, that representations in the individual cases should be made by the individuals concerned, the Department being called in to further negotiations only in an advisory capacity, until failing to obtain what is desired, the member places the matter finally in the hands of the Department. In that case the Department, where the case seems to warrant it, and on the approval of the member, has laid the matter before the Board of Railway Commissioners. The result in this respect has also been good, and the decisions following upon our representations have been largely favorable to the Association.

FREIGHT CLASSIFICATION.

Among the various matters of general interest to the Association, none is more important than the question of freight classification. It will be remembered that the Association filed its objection to the approval of Classification No. 12 with the Honorable the Minister of Railways, first, because this classification was issued without the approval of the Governor-in-Council as required by the late Railway Act, and secondly, because this classification introduced changes in the rules and ratings made without consultation with the shippers interested, and entirely without regard to the effect which those changes were likely to have upon them. An opportunity has since been offered to roughly discuss this matter before the Board of Railway Commissioners. During the sitting of the Railway Board in Toronto in June last the question was argued on behalf of the Association and, while it is admitted that a definite classification made with due regard to the interests of the shippers and the railways is very desirable, the brief time at the disposal of the Board in Toronto made it necessary to confine the representations of the Association to the actual important differences between Classifications 11 and 12.

TEMPORARY SCHEDULE.

The importance of securing a temporary classification was emphasized by the fact that a number of reduced ratings conceded by the railway companies to be reasonable, were being withheld and were likely to be withheld from the shippers interested if a temporary classification were not secured. This discussion and the compromise resulting therefrom, which was entirely due to the action of the Association, has shown that the Association has been prepared to meet these questions in a broad and business-like manner. The discussion before the Board has secured in addition to the enforcement of these various important ratings, withheld from the public by the railways, the reinstatement of a number of the ratings of Classification No. 11, which had been advanced in Classification No. 12, such, for example, as the sixth class rating for beams, columns and girders in carloads; second class rate for plows in less than carloads; first class rate for manufactured furs in less than carloads; third class rate for skewers in less than carloads; fourth class rate with a minimum weight of 14,000 lbs. for fanning mills in carloads, and second class rating for iron rotary blowers and exhaust fans.

MINIMUM WEIGHTS.

As far back as December last, the Association made representations to the railways regarding the excessive minimum weights charged upon light and bulky commodities loaded in large cars. The practice of the railway companies, with respect to these commodities, was to charge not less than a minimum weight of 20,000 lbs. upon commodities in 40-ft. cars, for which when loaded in 36-ft. cars the minimum weight was less than 20,000 lbs. Bicycles, for example, in 36-ft. cars are rated first class, with a minimum weight of 10,000 lbs. In other words, two 36-ft. cars could be used for the same minimum weight as a 40-ft. car, although the combined capacity and the cost of carriage would be much greater. Furniture with a minimum weight of 14,000 lbs. for 36-ft. cars would also take the minimum weight of 20,000 lbs. when loaded in 40-ft. cars. These are two of the many examples of the injustice imposed upon the public by this unfair rule. The attention of the railways was directed to the fact that the cost of carrying these large cars does not increase proportionately with the increased length of the cars, and all that they can reasonably expect, when larger cars are used, is that the minimum weight shall increase in proportion with the length of the cars. The modification of this rule secured through the Board of Railway Commissioners is purely a compromise. It does not give all that can be reasonably asked for, and when the discussion of classification is re-opened, as it will be, the proportionate basis for making minimum weights for larger cars will be contended for, in as far as this will be any advantage to our manufacturers. The minimum weight under the present rule for bicycles in 40-ft. cars is 15,000 lbs., a saving of 5,000 lbs., and for furniture in 40-ft. cars it is 17,500 lbs., a saving of 2,500 lbs. Similar savings result from this modified rule for cars exceeding 40 feet in length.

MIXED CARLOADS.

Rule 2 for Classification No. 12 represents a distinct departure from Rule 2 of Classification No. 11. In Classification No. 11 the mixed carload privilege was a broad and reasonable one, and corresponded with that in effect in the Official Classification territory in the United States. It was urged by the railways against the reinstatement of this rule that while a rule of this character might be a fair one on the short hauls in the Official Classification territory of the United States, the western lines of the Canadian Pacific Railway lie adjacent to the territory of the Western Classification, which adopts the distinctive heading principle for making mixed carload rates.

In order to bring the discussion to a conclusion and without admitting in any sense the reasonableness of this restricted principle of making mixed carload rates, the Association agreed to accept rule 2 of Classification No. 12, corresponding with that of Western Classification to be applied west of Fort William, and from points east of Fort William, to points west of Fort William, securing the reinstatement of the broad mixed carload principle of Classification No. 11 upon traffic moved in the territory east of Fort William.

It is confidently expected when the discussion of classification is resumed that the rule of Classification No. 11 will be secured to be applied throughout Canada. The whole question of classification is receiving careful attention that the interests of the Association individually and jointly may be properly represented when the Board of Railway Commissioners re-open the classification question as they are expected to do before the end of the present year.

COAST RATES.

The attention of the Canadian Pacific Railway was directed in February last to the discrimination which they impose upon the Canadian manufacturer and shipper in the matter of rates to Vancouver, Victoria, etc., the rates being higher from Montreal, Toronto, etc., to these points than from New York and intermediate United States territory

by from 20 cents per one hundred lbs. to 8 cents per one hundred lbs., according to classification. At the same time our rates are higher to Vancouver, etc., than rates from New York and intermediate points to Seattle, Tacoma and Portland by from 25 cents per one hundred lbs. to 13 cents per one hundred lbs., according to classification. The railway company declined to correct these rates, claiming water competition, which, while it might apply from New York to Seattle, would certainly not apply to the same extent, and in some cases not at all, from intermediate territory from which the New York basis of rates is used.

Articles were written for "Industrial Canada," of February and March upon this subject, and in a recent visit of the Manager of Transportation to Vancouver—failing to get the opportunity of presenting the case in Toronto while the Board was in session in that city—the matter was submitted to the Board in Vancouver, and was supported by the Boards of Trade of Vancouver, New Westminster and Victoria. It was urged that the railway was counting upon securing the advantage of the customs tariff and, while the railways in their defence disclaimed any intention of doing so, they were obliged to admit that without the customs tariff the goods which are now moved from Eastern Canada on a higher system of rates, owing to the customs tariff, would hardly be moved at all if there were no customs tariff, and the manufacturers in New York and intermediate points had access to our Pacific Coast cities on the present system of rates which discriminate in their favor. The decision of the Board in this case is awaited with interest.

IMPORT AND EXPORT RATES.

The question of import and export rates has also been brought up, the desire being not to secure an immediate and radical adjustment of the rates, but rather of impressing upon the railway companies the necessity, in making these rates, of considering our national interests. At present we are placed between the low rates from United States into Canada, lower per mile than those applied between Canadian points, and the lower through rates from abroad based upon the low import rates from the seaboard, which, as explained by the Canadian Pacific Railway, are entirely proportionals. In this regard it might be urged that while proportionals are made to assist the importation of foreign merchandise, the same proportionals are not made to assist the exportation of our manufactured products.

MARINE INSURANCE.

A matter to which the committee have given some consideration is the question of marine insurance from our Atlantic ports. The Association has urged upon the underwriters the necessity of giving consideration to the natural advantages and the lesser risks attending navigation to and from the port of Halifax. The Association desires that the Canadian ports shall not be handicapped in competing for the export trade from the territory that lies naturally tributary to them.

CARTAGE.

The Committee has considered the recently advanced cartage rates of the railway companies. It has taken consideration of the fact that while the general cartage rate now imposed by the railway companies probably does not altogether cover the cost of service, to a large extent it does, and to some extent it more than covers the expense, particularly so where the industries are situated, as they most frequently are, in proximity to the railway depots.

The Association filed its objections with the railway companies with respect to the increase in the charge for the cartage of "smalls," as a result of which objections, after a lapse of some little time, the railways have reduced their charge from 15 to 12 cents, the former being in excess of the actual general average cost of cartage, while the latter more closely approximates it.

CLAIMS.

Among the various questions laid before the Department since its inception, one is the matter of claims, and upon this subject the Department has acted in an advisory capacity. In some instances, it has also drawn the attention of the railway companies to their shortcomings. Claims are now being settled with more reasonable promptitude, but in this regard there is still something to be desired.

DELAYS IN SHIPMENTS.

There has been much complaint on the subject of delays, both to carload and less than carload shipments. While it is desirable that the individual should obtain what redress he can by direct representations to the railway companies, it is also desirable that the Department should be kept posted of these shortcomings, so that, as occasion arises, representations may be made in a general way that will ensure a more satisfactory service.

DEMURRAGE.

In connection with the movement of carload freight, a subject now much discussed in the United States, there is the question of reciprocal demurrage. This expression (reciprocal demurrage), means that if a charge of one dollar per car per day is to be assessed against the individual who unavoidably, or otherwise, detains the rolling stock of the railway company, the same charge should be imposed upon the railway company who unreasonably delays to place cars for loading or to move or place cars when they are loaded. A study is being made of this subject upon the broadest lines, and a case will be presented to the Board of Railway Commissioners in furtherance of this idea, when the matter is considered to be in fit shape for presentation. It will assist considerably if the manufacturers would communicate to the Department such information as they may have at hand from experience in the operation of their industries that would show the unreasonableness of the administration and the inelasticity of the present demurrage rules.

SPECIFIC CASES.

Of the various rate cases presented before the Board of Railway Commissioners, the three upon which judgment has been handed out have been practically favorable to the representations of the Association. The working of the Department with respect to these cases has met with the cordial approval of the firms interested.

The joint complaint of the Sutherland-Innes Co. and the Wallaceburg Cooperage Co., against the railways generally, was with respect to the advance in rates upon cooperage stock, from the mills west of London, to Montreal, from 16½ cents for local delivery and export, including terminal charges, to 18 cents, inclusive of terminal charges, for local consumption, and to 19½ cents, including terminals, for export. The decision of the Board restores the rate to 16½c., for local delivery, and orders that the rate upon export traffic be 18c. per one hundred pounds, including terminals.

The Sydenham Glass Co. complaint against the railways generally was regarding an advance in rates (due to the introduction of the Railway Act), the firm formerly enjoying rates to Toronto of 15c. and to Montreal of 21c., for carloads, the Detroit rates at the same time being to Toronto 13c., and to Montreal 23½c. The Association, on behalf of the Sydenham Glass Co., contended for the introduction of the Detroit rates to Toronto, Hamilton, Berlin and Montreal, which the Com-

mission granted, Berlin and Hamilton taking the same rates as Toronto, 13c., as mentioned above.

Stobel vs. the Kingston and Pembroke Railway interests many members of the Association. In fact, on behalf of two of our members, written arguments were entered in support of Mr. Stobel's representations. These had reference to the discrimination against cedar lumber, ties, poles, etc. The Board decided that the railways should substitute for their classification, which makes cedar a subject of special contract, a tenth-class rate, the same as for lumber and kindred commodities. The railways are also ordered to apply in their mileage tariffs the same rates upon cedar lumber as upon lumber of other varieties.

The Association has made representations on various other complaints, including those of the Dominion Millers' Association and the Split Pea Millers, of whom in both cases a great number of complainants are members of this Association. These complaints dealt, the first with discrimination against Canadian flour and grain products for export, as compared with products from United States points, and the second with an advance in the rate upon split peas for export, which has had the effect of killing the business. Complaints were also entered on behalf of the Tower Canadian Oiled Clothing Co., of the refusal of the railways to grant a carload rating, although it would naturally be supposed, the cost of transportation for carloads being less per one hundred lbs. than for less than carloads, that the railways would not hesitate to grant such an application for a carload rating, The Almonte Knitting Co. complained of the discriminatory rates upon coal from the Niagara frontier. The United Factories case was in respect to a serious advance in the cost of their raw material, which has to be freighted by rail from Penetang, resulting from an advance in rates upon logs from 2½c. per one hundred lbs. to 4c. per one hundred lbs. The Association presented to the Railway Commission, during their session at Vancouver, the complaint of the Coast lumber and shingle manufacturers of discrimination against cedar in the tariff of the C.P.R. to Manitoba points. The practice is to apply the same rates upon fir and cedar lumber east bound from Vancouver, Westminster, etc., until the Manitoba boundary is reached, when a discrimination is introduced against cedar of 10c. per one hundred pounds. It is worthy of mention that this discrimination does not exist against the cedar manufacturer in the mountain mills. It appears to be entirely due to an arrangement made by the C.P.R. with the Great Northern and Northern Pacific Railways, which the Canadian Company apparently is only obliged to respect into Manitoba. This arrangement was made without taking account of the fact that the cedar lumber, against which the discrimination is made, is not shipped from the United States mills, logs that are suitable for the manufacture of such lumber being converted by the United States lumber mills into shingles.

Rate studies have been made with respect to individual factories and their output, and representations made on individual requests in the matter of classification.

RAILWAY EXPRESS SERVICE.

The Committee wishes to reaffirm its recommendation already made that railway express companies should be subject to the control of the Board of Railway Commissioners, the same as the railway companies themselves, who, as a rule, are the owners of these express companies. This recommendation is attached to the report.

Since the inauguration of the Department, the Manager of Transportation has travelled through a considerable portion of the Association territory, has visited the branches in Toronto, Montreal, Quebec, Manitoba, and British Columbia, and has also represented the Association in Ottawa for a period of about two months. The Maritime members will be visited in the near future.

Correspondence and the interest of the members in the Department are well sustained and increasing.

It should be borne in mind that the communications with the Department are regarded as confidential, unless consent to the contrary is obtained from the member concerned.

RESOLUTIONS.

In conclusion, your Committee beg to present the following recommendations regarding important transportation issues:

1. That in connection with propositions made from time to time respecting the establishment of new steamship lines for the benefit of Canada's foreign trade, that for such of these as may seem reasonable, a competent business Commission, including one expert in the operation of ocean steamships, should be appointed by the Dominion Government, to thoroughly enquire into the prospects of trade extension, report upon the advisability of establishing steamship communication, and supply



H. COCKSHUTT,
Chairman Railway and Transportation Committee, 1904-1905.

Canadian exporters, in all branches of trade, with such information as they may require for the exploitation of the markets;

And further, that the possibilities of closer trade relations, through such means, should be promptly investigated with regard to an Eastern service to Australasia, a service to Mexico, and a service to the South American States.

2. That when such subsidized lines are or have been established, the Dominion Government should have a constant and businesslike supervision over the rates, the regularity of sailings, and all other features connected with the service, with a view to perfecting the facilities and encouraging Canadian shippers to patronize Canadian ports and Canadian steamship lines.

3. That such Canadian steamship lines should be extended a preference by Canadian shippers in both import and export trade.

4. That the Railway Act of Canada should be amended so as to place the express companies in Canada under the jurisdiction of the Board of Railway Commissioners.

5. That the Association re-affirm its belief in the necessity of a fast Canadian Atlantic steamship service, which will compete successfully in speed and rates with other Atlantic lines, and that we again urge upon the Dominion Government to take prompt action in establishing the same.

All of which is respectfully submitted.

J. O. THORN, Chairman. R. J. YOUNGE, Secretary.

THE TRANSPORTATION DEPARTMENT.

Mr. Thorn: Mr. President and Gentlemen, I have a very few remarks I desire to make. In moving the adoption of the report, I desire to express my great appreciation of the hearty support received from the members of the Committee. To Mr. Miller, our transportation manager, the very sincere thanks of this Convention are due for the very able manner in which he has performed his many and often difficult duties. He is both by experience and ability eminently qualified for the position he occupies. I feel that the Committee over whose meetings I have had the honor to preside during the past two years, has provided a very practical and business-like policy, and also the means for carrying it out, which should make it comparatively easy for our successors to continue the good work that has been started upon a solid and substantial foundation. (Applause.)

Mr. Hobson: I have much pleasure in seconding the adoption of the report. I think the members of this Association are just commencing to realize what an important branch of the business transportation by railway is. When you consider for a moment that about 60 per cent. of our profits is taken by discrimination in favor of United States cities, we commence to realize how important it is to look after this business. In securing Mr. Miller the Association has been very fortunate. There is an old saying: "Set a thief to catch a thief." So, have a railway man to tackle a railway company.

Mr. P. W. Ellis (Toronto): With a large number of the manufacturers of the City of Toronto, I had the privilege of listening to Mr. Miller's address to the Railway Commission, and I am sure we were impressed with the grasp that he had of those intricate matters (hear, hear); with the attentive hearing he received from the Commissioners; with the great value to the members of this Association to have always ready to assist them the services of a gentleman of his wide experience and ability, and so well qualified to hold his own against the highly trained expert employees of the railway companies. In fact, the services of Mr. Miller and the Transportation Department have accomplished so much already for our members in the way of added facilities, more prompt attention, and important savings, advantages enjoyed not only by members of this Association, but by all manufacturers throughout our wide Dominion, that I only hope they will appreciate participating in the benefits obtained, and will recognize their obligation by joining our ranks and assisting in the good work at the cost of but a small annual fee. (Applause.)

SPLENDID RESULTS ACHIEVED.

Mr. W. K. George: Mr. President, I would like to add my voice to what Mr. Ellis has said in reference to our appreciation of the work Mr. Miller has done for the Association. I also had the pleasure of being present when Mr. Miller was making his presentation before the Railway Commission in the City of Toronto, and I felt at that time if every member of this Association could have been present there they would have realized that the fee they pay to this Association was a mere bagatelle in comparison with the advantages which will accrue to them from the work of this department alone. I have heard more than one member of this Association state already that the advantages, which have accrued to them from the work of Mr. Miller in presenting their cases clearly and forcibly before the Railway Commission, have simply put entirely in the background the question of their annual fee to this Association. They have been recouped many times in the course of a few weeks for the annual fee paid.

I think that this report is a most important one. I hope that every member here has followed it, and will consider it and will realize the benefits that the Association is trying to secure, not only to its own members, but to every manufacturer and shipper throughout the country, in endeavoring to get a fair basis of rates. That is all we ask. We do not ask anything unfair or unreasonable of the railway companies. We expect them to make a legitimate profit. We hope and ask to be placed in a position which gives us a fair chance to compete with other men shipping from localities which are competitive. For this purpose the Association has placed at the disposition of its members a gentleman who is thoroughly skilled in railway matters, who can appear before railway men and who knows the ground they will take and can answer their arguments very much better than any of us can do. As we appear before them, we are absolutely lost—at least I know I am, and I think I can speak safely for the vast majority of our members when I say in an argument with the railway men on their own ground, we would be at sea, in a very few moments. We have at our disposal a gentleman who is able to take off your shoulders the burden of fighting your own cause, and I want every member of the Association to appreciate the benefits placed within reach through this department. (Applause.)

Mr. Wilkins: Mr. President, in reference to this report, which I think is one of the most important that has come before our Association at this meeting, and which I feel quite sure every member of the Association will fully appreciate, I beg to offer a suggestion that copies of these reports might be sent to the manufacturers of Canada who are not at present members of our organization, and when these men see the work that is being accomplished, I have no doubt it will tend to augment the membership of this Association very materially. There are many manufacturers in isolated places throughout our Dominion who do not know of the work that is being done by this Association, and if they took the trouble, which no doubt a large proportion of them would, to read these reports, they would feel that there was something to be got by being members of this Association, and I think we would find that their applications would come in very much more freely in this way. I think it would be like sending out a commercial traveler with a good set of samples.

The President: I think that is an excellent suggestion. The manufacturers of Canada, whether members of this Association or not, must realize that this Committee—and I would like specially to refer to the Chairman, Mr. Thorn, and Mr. Miller—has done a splendid work for the manufacturers of Canada. We want no undue advantage in regard to our railway friends, because we must work with them for the upbuilding of this country, but we want fair treatment. We want to put our case before them fairly, and I think we owe a great deal to the Chairman of the Committee, to Mr. Miller and the Executive Officers.

The President put the motion to adopt the report, which on a vote having been taken, was declared carried, with applause.

The President called upon Mr. Ellis to present the report of the Parliamentary Committee.

Mr. Ellis: Before reading the report may I draw your attention to the fact that a very important body of men are at present meeting in convention in the City of Montreal, "The Institute of Civil Engineers," and I understand their President, Sir William White, is a gentleman of great eminence in that profession, and stands perhaps as one of the most representative men in Great Britain. My object in bringing it before you is that you may perhaps consider it opportune and to our advantage to extend to that gentleman an invitation to our banquet on Thursday night. We will certainly enjoy and benefit by listening to a few remarks from him.

The President: I think that is an excellent suggestion, and I may say we will be very glad to send that invitation at once.

Mr. Ellis presented the report of the Parliamentary Committee, which was received with applause.

REPORT OF THE PARLIAMENTARY COMMITTEE

Your Parliamentary Committee is pleased to report an active year's work. Twelve meetings have been held, and the members of the Committee have given their attention throughout the year to many classes of important legislation, also to the conditions of the labor market in Canada. The following features are worthy of special mention:

LABOR LEGISLATION.

Organized labor in Canada continues to be aggressive in seeking to secure class legislation to the detriment of our industries. Their representatives have been at Ottawa during the entire session, and their influence has been exerted to secure the support of members of both political parties. The result of this activity may be seen in the Union Label Bill, introduced by Mr. Ralph Smith, M.P., and the Alien Labor Bill, introduced by Sir William Mulock. A word with regard to these important measures may be of interest.

UNION LABEL BILL.

The Union Label Bill was introduced at an early date in the last session. It was at once met by a pamphlet issued under the direction of your Committee, and distributed among the members of both Chambers at Ottawa. This "argument" revealed the true nature of the Bill, and showed the consequences which would inevitably follow the enactment of such legislation. The Bill was identical with that introduced into the Senate last year, and if it became law would, undoubtedly, prove a handicap to Canadian trade generally, and a discrimination against all Canadian manufacturers and workingmen who are not identified with labor organizations. In other words, the passage of the Bill would mean the legalization by the Canadian Government of a boycott against the great majority of the free employers and employees of the country. It is a satisfaction to report that owing to the efforts of our Association the Bill was held over.

ALIEN LABOR BILL.

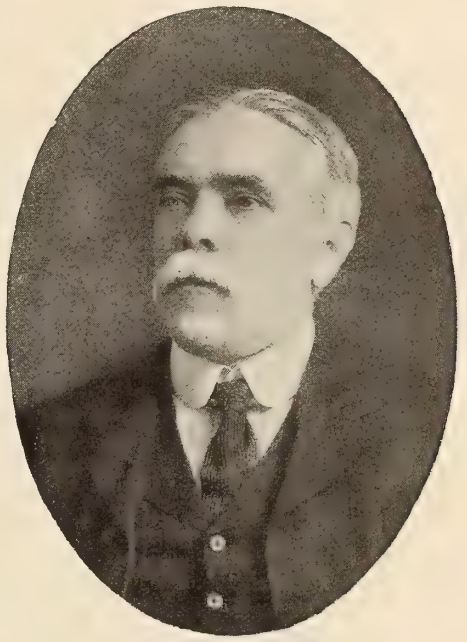
Several clauses of this Bill were particularly injurious to the manufacturing industries of Canada. The measure was introduced into the House of Commons during the last days of the session. Its provisions have been since made known to the members of the Association and need not be dwelt upon at length. The defeat of the measure has also been announced But your Committee would recommend that the Association should place upon record its strong disapproval of attempts made to carry any class of industrial legislation through the Canadian Parliament or Legislatures on short notice, and without giving ample time for those most concerned in the operation of such measures to study them carefully, weigh their significance and make such representations to the Government as they desire. Had it not been for the prompt and energetic action of your Committee and the support of our members generally, this detrimental Bill would probably have become law.

Dealing with the subject of alien labor, your Committee beg to recommend that notwithstanding the justification of alien labor laws, as retaliatory measures, no law should be enacted in Canada which will prevent or offer interference to Canadian industries in securing the best experts and skilled mechanics available. Canada needs population, and skilled workingmen, generally speaking, make desirable and valuable citizens. With due regard for the dignity of the Dominion in maintaining an Alien Labor law, Canadian industries, whether they be agricultural, mining, forest, fisheries or manufacturing, should be rather encouraged to import such workmen as they cannot secure at home.

SCARCITY OF LABOR.

This subject naturally leads to a discussion of the Canadian labor market, and the elements creating and affecting the conditions.

Throughout the year statements have been issued by labor organizations in Canada, and circulated in Great Britain, to the effect that skilled mechanics were not required in the Dominion, and that the conditions of living, etc., were such as to make emigration undesirable. The movement was even carried so far as to appoint representatives to visit Great Britain to support these statements. It is quite apparent that the rapid development of the Dominion with all the promising and prosperous conditions of our new country have warranted and are warranting a large immigration of many classes of mechanics, and any organized effort to retard the tide of workers must be looked upon as unnatural, short-sighted and unpatriotic.



P. W. ELLIS,
Chairman Parliamentary Committee, 1903-1904.

In order to ascertain the exact condition of the labor market, and to assist our members to secure the help which they require, your Committee adopted the most reliable method which could be followed. Twice a year enquiry circulars are issued to the members of the Association. The results of these enquiries indicated that in January last among the members of this Association alone, 4,697 hands were required, and in July, 6,717. This information, obtained at first hand, contradicts conclusively the false statements referred to, and your Committee has given publicity to the facts both at home and in Great Britain. While the Association takes no active part in importing mechanics, reliable sources of supply in Great Britain have been recommended to the members in order that they may have their requirements filled.

ATTITUDE OF PARLIAMENT.

One of the most regrettable circumstances in connection with these conditions is the fact that so far as known, no steps have been taken by Parliament either to contradict slanderous reports concerning Canada or to relieve the stringency from which employers in Canada are suffering. The Department of Immigration, while spending nearly a million dollars last year to secure desirable immigrants, has laid down the exclusive arbi-

trary policy that mechanics are not to be invited to Canada, and has carried the policy so far as to placard Great Britain with such notices as the following:

WARNING TO EMIGRANTS

The Immigration Branch of the Canadian Government desires it to be distinctly understood that individuals and organizations sending out mechanics to Canada, are not approved of, nor in any way connected with the Canadian Government.

J. Bruce Walker,

Canadian Government Office,
52 St. Enoch Square.

The enquiry may well be made: Why should manufacturing industries or skilled workmen, as a class, be discriminated against in the policy of Dominion immigration? Industries have been established here at enormous cost. They give employment to a large and increasing number of our population. They are a source of wealth to the country. Many of them are competing at a disadvantage against foreign competitors. Is it not reasonable to expect that when sufficient labor cannot be procured in Canada, and when large amounts are being expended by the Government to induce immigration, that the Government will, at least not discourage the immigration of skilled workers required in Canadian industries.

RESOLUTIONS.

Dealing with this aspect of the labor question, your Committee beg to submit the following recommendations to be forwarded to the Dominion Government and to the members of the House of Commons:

1. That the Dominion Department of Labor as such should give equal consideration to the needs of employer and employee, that its exclusive system of labor correspondents should be abolished, and that it should, as far as possible, be constituted in policy and practice, an impartial tribunal to advance the interests of all classes in the Dominion.

2. That provision should be made for the lawful importation of skilled mechanics from any other country, provided that the help required cannot be obtained in the Dominion.

3. That the Immigration Department of the Dominion Government should encourage and not discourage the emigration to Canada of the best classes of skilled workmen from other countries, provided that these workmen are required in Canadian industries, and cannot be secured in Canada.

GENERAL LABOR QUESTION.

Dealing with the general relations existing between employer and employee in Canada, your Committee is pleased to report that there is apparently a growing desire on the part of both to consider more and more the interests of the other. And yet, the strikes reported during the year involved a loss of 671,227 working days. To a young and sparsely populated country this means an enormous loss. Less than one-half of these strikes were due to differences on the question of hours and wages. It is earnestly hoped that the coming year may see the establishment of more friendly relations between employers and their men.

B. C. CANNING INDUSTRY.

One of the special duties of your Committee during the past year was the study of the conditions existing in the salmon canning industry in British Columbia. This industry, which is one of the most valuable in Canada, has not prospered during the past few years, largely owing to the insufficiency of supply, due to a variety of causes. After reviewing the facts supplied to us by leading individuals and associations representing the industry, recommendations were made to the Department of Marine and Fisheries at Ottawa. We are pleased to say that these recommendations were in part adopted, and the prospects for the industry are much brighter than formerly.

PROVINCIAL LEGISLATION.

The Association has also given attention to important legislation introduced into the Provincial Legislatures of the Dominion. To this your Committee would call special attention as a field which should be more carefully watched than it has been in the past. Every Provincial Parliament is beset with legislation which affects the industries of the country, and in many of the provinces the manufacturers are feeling the effects of legislation which slipped through without any opposition on their part. The work accomplished during the past year by committees appointed by our branch organizations is highly commendable, and will surely be appreciated not only by the manufacturers in their respective provinces, but by the Provincial Government to whom expert opinion upon the significance and consequences of the legislation they are dealing with, must be very valuable. The following Provincial measures are worthy of notice:

QUEBEC.

The branches in Quebec were called upon to face a Workmen's Compensation Bill of a very serious character. This Bill provided that employers should be held responsible for all the consequences of any accident on their premises even though they might not be at fault. In other words, the consideration of fault was to be eliminated. In addition to this, the Bill called for extraordinary compensations. Its passage in the Province of Quebec at any time in the future can only be regarded as a menace to employers, and a distinct blow to manufacturing industries.

Another important measure considered in the Province of Quebec was a Bill imposing a tax upon Extra-Provincial Corporation Companies. The tax proposed was comparatively high and would, no doubt, have diminished to some extent the transaction of business between the Province of Quebec and the other Provinces of the Dominion. Your Committee regard this whole question as worthy of consideration by the Association. Extra-Provincial Corporation laws exist now in the majority of the Provinces of the Dominion. Nominal taxes, which sometimes constitute a considerable item of expense, are in some cases imposed upon the companies; in other cases commercial travelers must also pay a tax. All such laws, however, must be looked upon as unnatural barriers, tending to separate Provinces which should be more closely drawn together.

Your Committee would, therefore, recommend that during the coming year, this subject should receive special attention from the branches of the Association, and an effort made to remove such obstacles to trade and encourage the freest possible intercourse between the producers and consumers of all the Provinces.

ONTARIO.

In Ontario, a number of important measures have been considered. The assessment question, which has been under consideration for the past few years, was dealt with in a Bill covering the whole Province, and your Committee represented the members throughout the long discussion which took place. The abolition of the personalty tax was looked upon with general favor, and it is hoped that the new business tax, which will come into operation in 1906 will remove those inequalities which

made the present law unsatisfactory, and bring about a uniform set of conditions, so far as taxation is concerned, throughout the Province.

Other legislation dealt with in Ontario included the following:

(*a*) A Bill to provide for the inspection of portable engines and boilers.

(*b*) A Bill to change the obligations existing between landlord and tenant on factory leases.

(*c*) A Bill respecting qualifications of stationary engineers, and bringing them, in a measure, under the control of organized bodies.

(*d*) A Bill to amend the Factories Act in so far as female workers are concerned.

Upon all of these measures, the Association was successful, the first three being thrown out, and the last being amended to meet the views of our members, who are only too glad to co-operate in making factory conditions for girls as comfortable and attractive as possible.

In the opinion of your Committee, the attention of the Association should be given in the near future to secure franchise rights for incorporated companies in the Province of Ontario, and in any of the other Provinces where these rights are at present withheld.

Incorporated companies generally represent large taxable interests, and should have a voice in the government of their respective municipalities.

CONCLUSION.

In concluding this report, your Committee desires to express its thanks to the members generally for the interest which they have taken in our work. Without their prompt co-operation, our efforts would, in some cases, have been vain.

We trust that the interest, which they have manifested, will continue to increase so that every manufacturer may keep fully informed upon all legislation introduced into Parliament which affects the industries of the country. It is difficult to estimate what serious results would surely follow indifference and inattention upon our part in connection with these important matters.

Your Chairman desires also to express his appreciation of the faithful support rendered by the members of the Committee throughout the year.

All of which is respectfully submitted.

P. W. Ellis, Chairman. R. J. Younge, Secretary.

ATTITUDE TOWARDS LABOR.

Mr. P. W. Ellis: While moving the adoption of this report, Mr. Chairman, it occurred to me that it would be well to emphasize a condition which exists among the employees of this country that many of you may not have thought of, that is, in the Dominion of Canada there are two classes of employees, one, and a very large class, who are indifferent to competition from without the Dominion; the other are employees of members of this Association, and of all other manufacturers in Canada who are vitally interested in the competition of the workingmen operating outside of this Dominion. Now, Mr. Chairman, it is most significant that organizations of labor are directed and controlled by that class of employees who have but an indirect interest in the conditions that exist outside of the Dominion, and the very fact that that condition exists, prompts them to pass resolutions and to make statements which are antagonistic to the larger number of their fellow-workmen in this country, not intentionally, not selfishly, but through sheer ignorance of the conditions. It appears to me, Mr. Chairman, that there should be two congresses of unions, if we must have them—and they are here, and it is stated are here to stay—unions representing that one class of employees who are competing with each other only within the limits of this Dominion; unions representing that other and more numerous class of employees who compete with the foreign workman, and who are as vitally interested in having a proper tariff to protect the industries of this country as we, the employers of Canada are. I am sure, if we can meet these men, and go into these matters thoroughly and practically, as business men—and we should be able to do so—I am sure we can soon arrive at a mutual understanding of our joint interests. Undoubtedly, in my judgment, we can agree that a tariff in this country, which will effectually transfer to the workshops of our Dominion the manufacture of many of the goods we now import from other countries, will lead to higher wages for the wage earner, a better return for capital invested, and no higher cost to the consumer. (Applause.)

Now, gentlemen, these are not idle words. It is a conclusion that is, in my judgment, strictly accurate, and I am of opinion that if our employees can be brought to see this matter in its proper light, instead of engaging in ruinous strikes that prevent the employer giving them a proper return for their labor, we will have instead of opposition their most earnest co-operation. It is my earnest desire, and I am sure it must be of each member of this Association—and perhaps it can be arranged before the close of this convention—that the representatives of that important labor organization now meeting in this city, will meet with the representatives of our organization, that we confer together dispassionately and prudently with a sincere desire to arrive at the best results and endeavor to agree upon those fundamental principles which mean so much for the success of the industries of Canada and equally for the success of all our employees. (Applause.)

Mr. McGill: Mr. Chairman, it gives me great pleasure to second the adoption of this admirable report from our Parliamentary Committee. With so full a report in our hands on the different matters treated of, I do not think it is necessary to add anything. The able manner in which this labor question is taken up and treated, and the tempered language which is used, can only bring the response of a loud "aye" from every member of the Association. The careful preparation of this report conveys to us a great deal of definite information which we were a little hazy about. The action of the Dominion Government in regard to restricting the immigration of skilled mechanics to the Dominion of Canada is something that no sensible man can understand. If there is anything a country like Canada wants it is intelligent and able workmen, and for the Immigration Department to spend the amount of money that our Dominion Government does and then publish such an advertisement or notice as is reported here, is past comprehension.

In listening to Mr. Ellis' words in proposing the adoption of the report, I am sure that you all feel with me that this Association is wonderfully fortunate in having a gentleman like Mr. Ellis as Chairman of such an important Committee. (Applause.) His work as President of this Association, and following that, as Chairman of this Committee, has been very great. I don't know of any work that is more unsatisfactory than Parliamentary work, and Mr. Ellis, I am sure, is entitled to your very best thanks.

QUEBEC COMPENSATION BILL.

The only matter I wish to treat on here in this report is that referring to our own Province of Quebec in regard to the legislation covering the compensation of workmen, and the Extra-Provincial Bill. I may say, gentlemen, that the Montreal Branch took this matter up with the Quebec Legislature. We have a very able friend in Quebec in the person of the Hon. J. Rolland, who is always there and always watching the interests of the Canadian Manufacturers' Association in that Legis-

lature as a member of the Legislative Council. The Compensation Act was introduced but not pressed in the Legislative Council at Quebec, and I understand that the Honorable Mr. Archambault, who introduced the Bill, stated privately that he acted in that way to give the employers of labor in the Province of Quebec an opportunity of expressing their views. I can assure, you gentlemen, that the Montreal Branch will take up that question with a great deal of care, and we ask the hearty co-operation and sympathy of our members in the other Provinces in having that Bill suppressed. We feel that the Factory Act of the Province of Quebec quite efficiently protects the workmen, and any further amendments to that Act are unnecessary.

EXTRA PROVINCIAL TAXES.

I am very sorry we were not able to prevent the passage of the Extra-Provincial Bill. I don't think that the manufacturers are in sympathy with the Bill that was passed in their Province taxing manufacturers holding charters in any other Province in the Dominion, and we did our utmost in opposing that Bill. We also passed strong resolutions in our Committees protesting against any such policy in any of the Provinces of



F. B. POLSON,
Chairman Parliamentary Committee, 1904-1905.

the Dominion of Canada which would place restrictions on the free interchange of trade. We are all fellow-manufacturers and speaking for the manufacturers of Montreal, while every man is keen in competition in business, I do not think any man is so small as to want to put a little pettifogging tax on a fellow manufacturer from another Province. It is our hope, gentlemen, that the manufacturers in all the Provinces will press upon the Local Legislatures the abolition of all such taxes.

I do not know, Mr. Chairman, that I can add anything to this admirable report, and as I said before, I have much pleasure in seconding it.

Mr. Wilkins: In reference to this very able report, I would like to say with regard to the taxes on commercial travelers in Prince Edward Island, it is my opinion, and I have no doubt the opinion of the members of this Association, that that is a most obnoxious tax, and one tended to restrict trade between the Provinces of this Dominion. In the Commercial Travelers' Associations we have done everything in our power to use moral suasion with the Legislature of Prince Edward Island to have this tax removed, and I think it might be good work for this Association to take up to use their efforts to persuade the Legislature of Prince Edward Island to abolish that obnoxious tax, and that work might be supplemented by an extra effort of our Maritime branches in relieving us of that tax.

LABOR AND THE TARIFF.

With regard to Mr. Ellis' remarks in reference to the working-men of Canada, I would like to relate a little conversation which took place between myself and the President of the United Garment Workers of America. He is President of an association of workmen and women of some 100,000 members. He visited Montreal last March and said, in conversation with me: "Mr. Wilkins, I have visited all the union factories from Vancouver to Montreal, and in travelling through the country I was much impressed to see the enormous amount of United States manufactured goods (shirts and overalls, such as I manufacture, in which he was interested), in your country." I explained to him the difficulties under which we labored, and he said to me: "It is a shame on the part of your Government that they do not protect your manufacturers and your working people to such an extent as to prevent our manufacturers being able to dump unlimited quantities of their stuff in your country." This was a free contribution to the Tariff Committee and to the protective policy of this Association.

I just wish to make these remarks to show what outsiders who believe in protection think of our Government in not giving us substantial protection in all lines, and which emphasizes the necessity of a revision of the tariff which this Association has so often urged upon the Government. I have much pleasure in concurring in this report.

ARBITRATIONS.

Mr. P. W. Ellis: May I refer very briefly to the fact (and I believe those present will be interested), that it was my privilege, and I might say my labor also, to be elected as an arbitrator upon three different occasions during the past year to prevent strikes in some industries in Toronto. Three representative working men were arbitrators on behalf of the labor interests, and three representative manufacturers represented the employers. At those conferences we fully discussed the trade and navigation returns as affecting the industries in question. We made it clear to the representatives of the workingmen that a reduction of productive wages is always the last resource of the employer; that he exhausts every other method of curtailment first. Too often do the workingmen believe that with their employers it is a case of *will not* rather than *cannot*. We fully discussed that unfortunate condition whereby workmen, in endeavoring to obtain a larger wage, attack their employer, thus destroying his ability to grant what they so much desire, for it must be obvious that the moment they do so they at once deprive him of the confidence of his banker and injure his credit. They reduce the volume of his business; they reduce the amount of his productive labor, and when they reduce the amount of the productive labor they increase the percentage charged upon same of the non-productive, fixed and other expenses, and create a condition that prevents the manufacturer granting their request. (Hear, hear.)

WAGES AND THE TARIFF.

In turning to the Trade and Navigation Returns, it was our object to draw their attention to the large imports into this country of goods which the employees who were striking were interested in. One of their representatives made the remark: "How can it be possible that there can be imported into this country so many goods of the kind we are working upon, and pay a duty of thirty per cent., and yet

engage in active competition with our productions?" We drew their attention to the fact that a prosperous manufacturer is of the greatest advantage to the employee. His ability to hold the market of Canada, together with the assistance of our Government, will extend his industry, make the charge of non-productive labor and expense account proportionately smaller with the increase of the productive. For example, suppose that, owing to the very large character of the industry in the United States, their non-productive labor, fixed charges, etc., etc., would represent say 40 per cent. upon productive labor, they would then base their profit upon productive labor plus 40 per cent. Now, in Canada, owing to the restricted character of the business, owing to the fact that our market is divided, and that others from the outside are sharing it, the Canadian manufacturer, instead of adding only 40 per cent., might require to add 60 per cent. or more. The difference between 40 and 60 per cent., if saved, would represent a very important amount which would enable the manufacturer to greatly increase the wages of the workers, and add to the earnings of capital invested, without increasing the cost to the consumer—a condition which is most desirable from every point of view.

CONFERENCES ARE DESIRABLE.

I was again acting as joint arbitrator in a dispute in a factory where the employees of one branch had gone out on "strike." We expected the greatest difficulty to arrive at a unanimous decision in this case, because the arbitrators on behalf of the employees were workmen of the same factory in another department, and success for their fellow-workmen would mean a proportionate advance for themselves. I am pleased to say that when we had the opportunity quietly, prudently, without bias, earnestly, to arrive at a just and proper conclusion by reasoning from the same premises, still using the tariff of this country and the Trade and Navigation Returns, we had no difficulty in bringing the representatives of labor to see the matter as we saw it and to agree with us in bringing in a unanimous decision that the striking men should not have their request granted. And further, gentlemen, I may tell you that in the first arbitration, the arbitrators, who were men prominent in the ranks of labor, men well able to represent the great interests at stake, expressed surprise that the manufacturers had arguments so convincing. These arguments, they admitted, appealed so much to their sense of what was fair and just, that they only regretted the fact that there were not more of such conferences, and that the employees of the factories of Canada did not better understand the strong position which the manufacturers occupied and the unanswerable arguments by which they are able to support that position. (Applause.)

TRADE MARK AND DESIGN ACT.

Mr. T. L. Moffat, Jr., (Weston): In reference to the Trade Mark and Design Act, I was a member of the Committee appointed by the Stove Association to look into the matter, and we went into it very thoroughly, had an expert patent lawyer at it. We decided upon some definite amendments which should be made, at least as far as they affect the stove industries, and presented them about a year ago to the Parliamentary Committee. It is not usual for the C.M.A. to keep things back a year, for if they take a year, how long will the Government take? But Mr. Younge assured me a few hours ago they intended to proceed at once, and that the delay has been due to a desire to hear from other interested branches of industry. We went into the question, and I will show you what we did. There is no meaning attached to the word "design" in the Act; there is no definition whatever given. One judge will do, as one of the judges did, in connection with Dougherty vs. The D. Moore Company some years ago; he gave his judgment one way; another judge's definition was different altogether; he reversed entirely the preceding decision. So just now they do not know what to do. We suggested that the meaning of the word "design" should be put in the Canadian Trade Mark and Design Act, just the same as it is given in the British Trade Mark and Design Act. That is a very simple suggestion. Another suggestion was regarding the penalty for the offence. In our present Act, the penalty is very small and no allowance is made for a repetition of the offence. We want the penalty either to be made very large or some allowance to be made when the offence is repeated. Those are two points. There are some other points, but I do not wish to take up the time of the meeting now.

COMMITTEE'S SPLENDID WORK.

Mr. J. S. McKinnon: This is another of the admirable reports submitted to this convention during this session—reports I believe of which every member is proud. I think this Association may congratulate itself upon having a man of such eminent ability as the Chairman of our Parliamentary Committee. While we have been attending to our industries at home, we find in this report that the Committee has been watching our interests in a very great measure indeed. I think it is almost marvellous, Mr. Chairman, when we think of the number of Bills that have been introduced into the Dominion Parliament, as well as into the Legislatures of the different provinces that make up this Confederation of Canada, when we think that this Parliamentary Committee has been alive and has watched every Bill that has been introduced into Parliament or Legislature, and I think, sir, that if these Bills go on multiplying as they are doing at the present time, the work of this Committee will be so great that this Association will have to rise to the occasion and add another permanent member to our forces in the person of a legal expert to assist the work of this Committee. I would like to add my humble appreciation of the valuable work that the Committee has done during the past year.

Mr. Vandry (Quebec): Our branch is giving its especial attention to the Workman's Compensation Bill, and we are in a position to-day to say that it is not likely the Bill will be passed by the House. Many prominent members have been interviewed, and they do not look upon the Bill very favorably; and we have great reason to believe that the Bill will not be passed, or if it is passed, it will be so amended that it will not injure the interests of the manufacturer.

THE SITUATION MISREPRESENTED.

Mr. Roden: I wish to add my voice to the intimation by the Committee as to workmen. We have been accused, as you know, of misrepresentation. I claim that it is the Government, or the men appointed by the Government, who have misrepresented the facts of the case in Canada. I cite one instance which is small compared with many industries in Canada. At this time, in 1903, we had to import five mechanics from Great Britain, and we have two more on the way now. We had an advertisement in the paper the other day for a man for odd work about the shops, and we had five men come in who had no trade whatever, who had been induced to come out here to go farming, who were not at all qualified, and who were anxious and willing to do anything. A large number of men have been induced to come to Canada who are not qualified for the work, that is, laboring and farming work. There should be two distinct classes called for, that is, farm laboring men or men qualified to do work of that character, and the highly skilled mechanic. We are all suffering from the need of skilled mechanics, and it is regrettable that this warning should be sent to deter men from coming. While we know it is difficult to specify exactly, we all know whether a man is qualified to do a

certain class of work well, and provided it is a class that is general in the Dominion, there will be no difficulty in finding him a position.

In talking over the matter with an Englishman last night, I can say he was enthused with the tremendous possibilities for a young man in Canada. He cited two instances of young men who had gone to Winnipeg and in a few years had met with success. They were educated men. He cited instances of men who had come out here with a general knowledge, and not being qualified for farming, and not qualified mechanics, they had made a failure. We have had engaged in our factory this past year four men who were induced to come out for the purpose of farming, and were told it would be an easy matter to get that kind of work. When they arrived in our great West they had to give it up, and come back again. We presume there are hundreds who have gone back disappointed, claiming there is no opportunity for young men to get on in Canada. I claim that such statements are a misrepresentation of the true facts as they exist in Canada to-day.

We all recognize the tremendous value of the work done by this Committee and the benefits we have been obtaining through the checking of measures introduced into our Parliaments, which injuriously affect the interests of employee as well as employer. We all endorse very highly the report.

The President: I do not think we could say too much in praise of this Committee and its work.

The President put the motion to adopt the report, which, on a vote having been taken, was declared carried.

AMENDMENTS TO BY-LAWS

Mr. Younge: Mr. President and Gentlemen,—The amendments to the by-laws, as received at the office of the Association under the terms required by the Constitution, were forwarded to the members of the Association under date of August 29th, and I presume these have received your attention before coming to the Convention. The first change suggested is that under "Committees," Section 1, Par. 1, be amended to read as follows: "The Executive Council shall be composed of the President, Vice-Presidents, Treasurer, the Chairmen of the Branches of the Association, the Chairman of the Sections of the Association, and one member for each fifteen members of the Association, as determined by the membership on the day of the Annual Meeting." The change made there is to add: "The Chairman of the Branches, and the Chairmen of the Sections," to the Executive Council.

The President put the motion to adopt, which, on a vote having been taken, was declared carried.

BRANCH EXPENSES.

Mr. Younge: Change No. 2, under "Branches of the Association," is, that paragraphs 5 and 6 be struck out. (Reads paragraphs.) As a substitute for these two paragraphs, the amendment suggests the following: The expense of any branch of the Association, except that situated at the head office, shall not exceed 50 per cent. of the amount of fees paid by members of the Association in such branch, and one-half of such 50 per cent. shall be for the remuneration of the Secretary of the branch where he is a salaried officer. No branch shall incur any liability in the name of the Association."

I might explain what perhaps is not very clear in this paragraph. It is not expected that the branch of the Association at the head office will require fifty per cent. of the receipts from members in that branch. I think the branch in Toronto costs the Association this year, in the way of actual expenditure on behalf of its members something less than $100, while as a matter of fact the receipts of that branch amounted to nearly $5,000. This resolution permits branches away from the head office to have one-half of their entire receipts, one-quarter of such receipts to be the salary of the Secretary, and the other quarter to be devoted to the general expenses of the local branch.

SALARIES OF SECRETARIES.

Mr. Thorn: I don't happen to know who conceived the idea, but I think it would be a serious mistake for this convention to adopt it in its present form for the reason that it will put in the by-law and take out of the hands of the Executive Council the fixing of the remuneration or salary of the secretaries of the branches. Now, I am sure, we are all in favor of the secretaries being adequately remunerated, but the power to fix the salary of the secretaries is now in the hands of the Executive Council, where I think it should remain. I speak from experience in this matter because when we reorganized the Association that was one of the first things we found necessary to do, to have it clearly laid down hereafter all employees of the Association were to be entirely under the control of the Executive Council in every way. There is another feature in connection with it. As it is worded here it would give the branch in Toronto power, I maintain, to spend more than 50 per cent. I don't suppose for a moment that was the idea of whoever originated the suggestion, but it is worded in such a way that they certainly could spend more. I think it would be a serious mistake to put a matter of this kind in the by-laws. I think it should be left in the hands of the Executive Council, and if I am in order, I beg to move the whole matter be referred to the Executive.

The President: I understand the recommendation comes down from the Executive Council itself.

Mr. Thorn: I never heard of it coming before them at any meeting I was at.

The Secretary: This system of payment was adopted at the Executive Council some few months ago. While it comes to this Association in annual meeting from the Nominations and Resolutions Committee, it was adopted by the Executive Council previous to that time.

Mr. McGill: I have much pleasure in seconding Mr. Thorn's motion in regard to this. Our Association, I think, is in its infancy. We expect to add a great many to our numbers in the next year. We don't know what this thing will amount to. I think the by-law as it stood is all right. We elect our Executive Council, and we have perfect confidence in what they do. We know they will do right. And while the Executive Council has put this before this annual meeting for our consideration, I think it is quite in order to refer it back to them for further consideration and let it come up at our next annual meeting. (Hear, hear.)

Mr. Booth: I think the idea was that the branches themselves wanted to know what definite sum they would have to expend on their behalf, and I don't see anything wrong in it. They would know they could expend that much and that the Secretary's salary should not be less than one-half of that sum. They do not say they are going to hire a Secretary. There is no authority given there.

The President: It does not say, "less," and it just occurs to me that in future, say fifteen or twenty years from now, that might be an enormous salary. It seems to me the best thing we can do is to send this back to the Executive Council, if that is your wish, gentlemen. (Carried.)

LORD'S DAY ALLIANCE.

As previously arranged the convention was waited upon at this stage by a deputation representing the Lord's Day Alliance of Ontario, and consisting of the following gentle-

men;—Rev. Canon Renaud, Rev. Dr. Gordon, Rev. C. E. Manning, Rev. J. A. George. Each of these gentlemen addressed the Association in turn and solicited the co-operation of the manufacturers in endeavoring to preserve for Canada a quiet Sabbath.

After their views had been presented, Mr. Robert Munro, ex-President of the Association, at the request of the Chair, responded as follows:—

Mr. Munro: Mr. President, after what we have heard, it is a very simple and pleasing duty for me to express in your name our acknowledgment to the gentlemen who have visited us this afternoon. When the letter of Dr. Gordon was read this morning, a gentleman from Ontario was the first to respond. Perhaps he thought we Quebecers required the assistance of the clergymen, and yet I may say we have a good opinion of Ontario in this regard. I think I may say for the city of Toronto, there is not the sound of the hammer or any instrument around the factory on the Sabbath Day.

MANUFACTURERS SABBATH OBSERVERS.

I was sorry to gather from the first speaker he feared we had fallen from grace. That induced me to interrupt to ask whether he referred to the Railway Companies. If the clergymen present understand, the Manufacturers' Association does not include the Street Railway or the greater Railway Companies; we do not represent and we have no control over, nor membership in those institutions which make a good deal of noise on the Lord's Day. A good deal of the work on the Sabbath Day around the city of Montreal is in connection with them.

I am sure that we manufacturers agree with the economic rules laid down, speaking generally. The fact is we do not want men that do not care for Sunday. (Hear, hear). Our best men are self-respecting men; the men that do the work best are the men that have self-respect for themselves and families, and that observe the Lord's Day. When I find irreligious men or women I do not take much stock in them. I hope that the words spoken will be well heard and very thoroughly considered by every member present.

NO UNNECESSARY WORK.

What occurred to me in connection with my own business while the clergymen were speaking was this. Our place is always in charge of a man day and night. Sabbath and week day, we have always some man in charge of the place, all the time, day and night; we could not at all leave the place without. These men that work on the Sabbath take it in turns so that once in ten or twelve weeks there are certain men engaged to keep on from Saturday at one o'clock till Monday morning. Apart from that we have a man who goes around to keep the fires alive, so that the heat is not away from the furnaces. Repairs I never allow on the Sabbath Day, and have never done so. When it has been pressed upon me I have not allowed it. I do not know whether we are all of one mind in regard to that. I think the impression I have gathered from the manufacturers generally is that we do respect the Sabbath Day, that we want our work people to respect it also.

I would add to that this, that most of us close on Saturday at one o'clock. It has been said Saturday afternoon should be a kind of preparation for the Sabbath Day. I think I may say most of our factories close on Saturday afternoon so that we do contribute a little in that way I hope, to the observance of the Sabbath. And then I don't know what the experience of the ministers is, but I am not sure that among those who attend worship in our city most regularly are the men who are sitting here this afternoon.

HELPFUL CONFERENCES WITH WORKMEN.

With regard to the matter of the workmen, I may inform the gentlemen we have been speaking on that very question this afternoon. We have been invited on several occasions to confer with the workingmen on various questions. The Chairman of our Parliamentary Committee has recited to us this afternoon two experiences he had in conjunction with other gentlemen and an equal number of working men in regard to strikes, which in both cases they were able to prevent with credit to both parties. We have already signified our willingness to meet the representatives of the Labor Congress. We have done that because we believe a great deal may be done by the employees having a fuller knowledge of the difficulties which employers have to face, and of the questions and methods by which they regulate the wages which it is possible for them to pay. We are most willing to discuss questions of that kind with our workmen, and we believe if those conferences are held from time to time it will do a great deal of good to remove the misunderstanding as to what a fair rate of wage really is.

Now, the advice which has been left us by our clerical friends that work on the Sabbath should be reduced to a minimum, I think I may say for the manufacturers, will be remembered by us, and that we believe what has been said will not be at all overlooked. I desire on your behalf to express the pleasure it has given us to meet these gentlemen. When we opened our meetings here with an invocation for blessing we did not expect we were to have had an answer in the form of four of our ministers, and when we did invite them this morning we did not expect a treat such as we have had in the very excellent and very reasonable way in which they have presented their views, and I move a vote of thanks to these gentlemen. (Applause).

Dr. Gordon: Mr. President, on behalf of the delegation or deputation I wish to thank you all very kindly and cordially for the exceedingly kind reception you have given unto us. We thank you very much and we are very hopeful as to the final issue of the work in which we are all interested and united in the main I think. (Applause).

The meeting then adjourned to meet again on Thursday at 9.30 a.m.

REPORT OF THE TARIFF COMMITTEE

Thursday, September 22nd.

The President called the convention to order at 10 o'clock a.m. Only members of the Association were present at this session, and as the discussions upon the tariff and insurance questions were announced to be private they are not reported in the convention proceedings. The report of the Tariff Committee, however, as presented by the Chairman, Mr. W. K. McNaught, is as follows:—

Your Tariff Committee begs to submit the following report.

TARIFF REVISION.

That another year has passed without bringing a general revision of the tariff, the Canadian Manufacturers' Association, as a national business organization, can only view with regret. The views of our Association on this important question have

been plainly and repeatedly indicated. During the year resolutions and statements have been presented to the Government, and in addition, while no general deputation has been organized, our recommendations for prompt action have continued to be made through individual members and through the various sections. Some few of these have resulted in changes made during the last session, and the appointment of a Tariff Commission to effect a general revision has at last been announced.

NEED FOR PROMPT ACTION.

Meantime, the need for such revision grows more and more acute. Our importations have increased by leaps and bounds, and for the past year are nearly $40,000,000 in excess of our exports.

Many industries are undergoing rapid changes both at home and abroad. Since the Canadian tariff was last revised, manufacturing methods in many lines have been revolutionized. The manufacture of new lines requiring new raw materials and new machinery has materially changed the conditions in Canadian manufacturing.



W. K. McNAUGHT
Chairman Tariff Committee, 1901-1905

Foreign competition, now national as well as individual, is keener than ever before. Canadian manufacturers continue to suffer particularly from the unfair and overwhelming competition of those gigantic aggregations of capital which control the specialized industries of the United States. This competition has become so dangerously unfair that the Parliament of Canada at its last session was obliged to enact special legislation to preserve one branch of Canadian industry.

From a business standpoint all these changes demand a general revision. Its necessity has now been clearly recognized by the Dominion Government in the regulations passed at the last session to prevent the "dumping" of foreign goods in Canada, and by the announcement that a Tariff Commission would be appointed. Any further delay in carrying out the revision means a continued and serious loss to the Dominion.

OUR POSITION STATED.

The position of this Association on tariff matters having been misunderstood and misrepresented, your Committee deemed it wise in January last to issue a short statement setting forth the views of the organization. This was forwarded to the Government and published in the press as follows:

1. The Canadian Manufacturers' Association is absolutely non-political.

2. It has declared itself during the past two years in favor of an early and thorough revision of the Canadian tariff.

3. It has advocated such revision:

(*a*) In order that manufacturing in Canada may keep pace with the changed conditions and the needs of our market.

(*b*) In order that capital and labor in Canada may be properly protected from the specialized and heavily protected industries of foreign countries, which use the Canadian market as their dumping ground.

(*c*) In order that Canada's resources may be developed and Canadian industries built up.

(*d*) In order that the surplus requirements of the Canadian market may be supplied from British rather than foreign sources.

4. The Association does not advocate the adoption of the United States tariff. Some lines of manufacture in Canada may require as much protection as the same lines receive in the United States, many may require less. What we believe to be necessary is a tariff framed from a national standpoint, primarily for Canadian interests, and also to build up an increased trade with other parts of the British Empire. Above all, however, it must enable Canadian products to meet the competition of foreign labor on fair and equitable terms.

5. The Association believes that it will be in the true interest of every citizen of the Dominion to revise the tariff so as to extend to every Dominion industry—mining, fisheries, agriculture, and manufacturing—the same efficient protection against foreign competition.

THE BUDGET SPEECH.

The last Budget Speech of the Minister of Finance was carefully considered by your Committee. It must be regretted that many more changes were not made in order to extend some measure of relief to those industries which are being so seriously retarded under the present conditions. After considering the changes made, your Committee, with the approval of the Executive Council, issued the following statement:

1. The Canadian Manufacturers' Association commends the general tendency of the recent tariff changes, announced by the Minister of Finance, inasmuch as they provide increased protection for certain Canadian industries.

2. The Association, while pleased that the Government has favorably considered the necessities of the woolen and twine industries, does not consider the measure of protection granted as sufficient, and does not approve of the departure made by the Government in increasing the protection by decreasing the preference. Such action will probably be misinterpreted in Great Britain, whereas an increase in the regular duties on these lines would still have maintained the principle of a uniform preference for British goods.

3. The Association, while gratified to note that the evil of "dumping" has been recognized by the Government, is of the opinion that it cannot be effectually remedied except by increased duties in necessary cases.

This conclusion is reached because of certain difficulties presented by the new regulations, as follows:

First.—The difficulty presents itself at each of the five hundred ports of entry in Canada, of a knowledge

of what goods are made in the Dominion, this knowledge being necessary in order to determine the application of the clause.

Second.—While a sufficiently high tariff would minimize the evils of "dumping," the new regulation still leaves room for evasion of the law and the slaughtering of foreign goods upon the Canadian market through rebates, commissions, and similar methods.

*Third.—The Association is of the opinion that if this regulation is to be operated with any chance of success, the exporters in foreign countries who send goods to Canada should be required to accompany each invoice of such exports with a declaration stating not only that the prices named in the invoice are the ordinary credit prices in the manufacturers' market, but that no arrangement for rebate, reduction or compensation has been or is being made with the importing firm directly or indirectly.

*Fourth.—If the new clause is to be operated effectively, a large and competent staff of experts is immediately rendered necessary.

*The third and fourth recommendations have since been practically adopted by the Government

4. The Association still has the earnest conviction that "the changed conditions, which now obtain in Canada, demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries."

GROWTH OF PROTECTIONIST SENTIMENT.

Your Committee cannot but report with satisfaction the continued growth of a national protectionist sentiment in Canada, as evidenced by both the general public and the Dominion Government. While a general revision has not yet taken place, the active and constant work of this Association may be said to have produced splendid results. Business men in every branch of trade, and of all shades of politics are to-day recognizing the fact that for the welfare of the Dominion the tariff should be a national rather than a party question, and that industries, as national assets, should be defended from foreign invasion.

RESOLUTIONS.

In conclusion, we beg to submit to this Convention, the following recommendations:

That the Canadian Manufacturers' Association, assembled in Annual Convention, does place itself upon record, as follows:

1. That we pledge our continued support to the Tariff resolution passed at the Annual Meeting held in Halifax in 1902, urging an immediate and thorough revision of the Canadian tariff, from a national business standpoint.

2. That we re-affirm the resolution passed at the Annual Meeting, held in Toronto last year, recommending the appointment of a Tariff Commission of experts, as follows:

"That we recommend the establishment in Canada by the Dominion Government of a permanent Tariff Commission of experts, who shall have constant supervision of tariff policy and changes, and shall follow closely the workings of the Canadian tariff, with a view to making such recommendations to the Government as will best conserve and advance the interests of the Dominion."

3. That we stand opposed to any arrangement for reciprocal trade with the United States affecting the manufacturing industries of Canada.

4. That we again express our disapproval of the bounty system, as a substitute for the policy of protection.

5. That in the coming general elections we pledge our individual support to those candidates, irrespective of party, who announce themselves publicly in favor of an immediate general tariff revision upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries.

All of which is respectfully submitted.

W. K. McNaught, Chairman. R. J. Younge, Secretary.

After careful discussion in which the Tariff Committee were highly commended for the excellent report presented it was decided by an almost unanimous vote to amend Clause 5 of the recommendation to read as follows:—

"5—That in the coming general election we recommend our individual members to support those candidates, irrespective of party, who announce themselves publicly in favor of an immediate general tariff revision upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries." With this slight amendment the report as presented was unanimously adopted.

REPORT OF THE FIRE INSURANCE COMMITTEE

The President then called upon Mr. J. P. Murray to present the report of the Special Committee on Fire Insurance. The report as presented is as follows:

To the Members of the Canadian Manufacturers' Association:

The premiums the members of this Association are paying annually to insurance companies are more than $3,000,000. This figure is based on the returns made by the members of the Association showing insurance exceeding $150,000,000, with an average rate of premium considerably over two per cent. If the conditions surrounding this immense amount of insurance are not as they should be, or if the rates are excessive, we see at a glance the burden that the growing manufacturing industries of Canada are carrying.

Insurance is a necessity to the manufacturer. His large investment, his financial arrangements, and the continuance of his business all demand it. Without it in many cases the necessary funds to build, equip or carry on business could not be obtained. Not only do business requirements demand it, but no manufacturer feels safe without it, and unless rates are prohibitive he will have a large percentage of his insurable possessions protected.

The manufacturer must also know what his insurance is going to cost him. Insurance premiums affect the cost of factory products in the same way as any other fixed charges. They must be definite, and cannot amount to a figure which will prevent the manufacturer from finding a market for his goods in competition with the world. For instance, what is the position of a manufacturer who pays a premium of $5,000 on an insurance of $200,000, and fixes his prices accordingly, if his premium is to be increased without notice by one per cent., or by $2,000? It means, if the capital stock of his company is $100,000, that the insurance companies have taken a possible dividend of two per cent.

APPOINTMENT OF COMMITTEE.

The Executive Council of the Association saw fit to approve of a recommendation made by the Toronto Branch and appointed the present Committee. Reasons were given

that convinced the Council of the necessity of looking after the fire insurance interests of the members. The investigations carried on by the Toronto Branch since November, 1903, showed that the premiums in Canada were high and unstable, the system of inspection imperfect, the expenses of the companies, with particular reference to agents' commissions, were excessive, and that there was a lack of facilities for insurance in Canada. The claims of the insurance companies, on the other hand, were that rates were not on a paying basis before the recent increases, and that the municipal systems for fighting fire were sadly deficient.

These were the conditions the Committee were expected to investigate. We have spent considerable time in doing so. The information obtained and conclusions arrived at are not given to you without having been carefully studied by us, and we have endeavored also to fortify ourselves in every particular by expert opinion and advice.

HIGH INSURANCE PREMIUMS.

The premiums on fire insurance in Canada have been steadily increasing. The average rate on all policies written by the companies doing a Dominion business in 1898 was 1.26 per cent. In that year 34.91 per cent. of the premiums was distributed for expenses of management, reserve fund and dividends. In 1902 the rate of premium had increased to 1.47 per cent., and 61.74 per cent. of the premiums, or $6,424,795 went for the purposes above named. For thirty-four years (1869 to 1903 inclusive) the companies have collected in premiums $62,250,192 more than they have returned in losses. This amount is 32.5 per cent. of their total premium income. For the last eight years the percentage has been 36.34 per cent.

It is impossible to compare the rates on a risk in one district with those on a risk in another district without making a scientific study in each case. We are convinced that the rates charged by Canadian companies on factory risks are too high. The investigations carried on have shown us that a very large number of Canadian manufacturers are placing their insurance in the United States at rates much below what they previously paid in Canada. On one risk the premium paid to Canadian companies was reduced by United States companies from $1.55 to 55 cents; another risk was reduced from $1.84 to 31 cents, and no improvements in the risks were necessary in either case. Canada not only loses this business, but the factories that are insured in the United States are among the best in Canada, and the very risks the insurance companies would be expected to keep. The New England Mutual Companies that are now securing many Canadian risks are companies whose financial responsibility and reliability are undoubted.

PREMIUMS UNSTABLE.

The average rate of premium paid in Canada in 1902 was 1.47 per cent. Since then there have been several conflagrations in the United States and Canada. These have reduced the reserves of some of the companies considerably, but the fact that they were able to pay out of reserve funds such extraordinary losses is conclusive that the companies have always estimated losses on such conflagrations, and have charged accordingly for a conflagration hazard.

We always understood that an insurance contract, although made for a one-year term, was entered into after a scientific inspection and adjustment of rates, and, provided the risk was maintained at its first standard, and municipal conditions were not changed, the variation in rates would be slight.

Such, however, has not been our experience. The insurance companies disregard their conclusions and inspections to suit their requirements. After a severe loss the increase in rates in certain districts ranges from 25 per cent. to more than 100 per cent. In districts where increases for conflagration hazards would appear unreasonable they find fault with municipal equipment, which up to the time the increased rates were decided on was apparently satisfactory. The policy of the insurance companies appears to be to take the profits in the fat years, and to make the policy holders pay in the lean years.

The manufacturer is at present powerless to oppose such arbitrary actions by the different underwriting associations. He must either accept their decisions or place his insurance outside of Canada, where fair rates can be secured. What would become of the manufacturer if, after having a bad business loss, he increased his prices 100 per cent? If he attempted an increase of ten per cent. he would destroy all demand for his products.

EXPENSES OF COMPANIES.

It is sufficient for our purpose to divide the distribution of the premiums received by the companies into two classes: (1) That which is paid for losses; (2) that which is set aside for reserve, paid in profits and paid for business expenses. For the last thirty-five years in Canada the second division has amounted to 32.5 per cent. of the premiums; for the last eight years, 36.34 per cent.

More than 36 per cent. of gross receipts is too much to pay for such purposes. A legitimate profit and expense account in any business enterprise cannot be questioned. The old line companies, are, however, operating under high fixed charges which appear quite unnecessary.

AGENTS AND AGENTS' COMMISSIONS.

The New England Mutuals recognizing that middlemen were not necessary to secure business, have found that those requiring insurance do not hesitate to make direct application for it. Insurance is a necessity, and is a cash transaction. The insurance companies eliminate the competition of price, practically accept each other's inspection, and pay their agents from 15 to 20 per cent. of the premiums collected. This commission may not be excessive on a $10,000 risk at dwelling house rates, but on a $150,000 risk at factory rates it is unjustifiable. A large number of Canadian insurance agents are members of the different boards of underwriters. Their position on such boards, which fix the rate of premiums, is not satisfactory to the policy holders.

PROFITS OF COMPANIES.

Some of the insurance companies have stated that Canadian business has been unprofitable, but at least one has declared itself satisfied with Canadian returns. In 1902 the dividends of the ten companies doing the largest business in Canada ranged from 5.9 per cent. to 90 per cent. on the paid-up capital. The average dividend paid by these companies was 26.43 per cent.

For the last ten years the average losses of the ten companies carrying the largest Canadian business have been 64.84 per cent. of the premium income. This leaves 35.16 per cent. for other purposes. For purposes other than losses the percentage of individual companies ranges from 29.28 to 43.34, which figures should permit of large dividends.

EXPENSES OF COMPANIES.

The New England Mutual Insurance Companies, some of which have been established since 1835, are among the most scientific and successful companies in the world.

The expenses of such companies as the Manufacturers, Rhode Island and Mechanics have been reduced to less than 7 per cent. of the premium income.

Large business and large premiums do not explain these remarkably low figures. The Retail Hardware Dealers' Mutual Insurance Company of Minnesota commenced business January 1st, 1900. This company charged the board rates. After four and one-half years' business and only $1,625,000 insurance in force, this company was able to keep its expenses for 1903 down to 10 per cent. of their premium income. The average expense since the company started has been 13 per cent. They make an annual return to their policy holders of 30 per cent. of the premiums, and have a reserve equal to eight total losses.

INSPECTION OF RISKS.

Probably the weakest point in the methods employed by companies doing business in Canada is their system of inspection. If risks in Canada are carried at a loss the insurance companies have themselves to blame. Their system of inspection is little more than a name. They have allowed both municipal and individual equipment and protection to be treated with the greatest neglect.

The Board Companies have prevented all competition in premium rates. There is competition however, in the inspection. The company willing to accept a hasty inspection and a minimum office equipment, generally securing the business. Some factories are inspected in a very few minutes. Others are insured at the fixed rate without an individual inspection. If one company refuses the risk another company will take it without question. On this account neither the insured nor the companies take the recommendations of inspectors seriously.

Charges of broken promises have frequently been made against the underwriters. It is only with difficulty that a Board can be induced to promise a reduction for improvements, and a promise in writing is unknown. Almost invariably when improvements are installed the companies decline to make the reductions promised or require additional improvements before putting the reductions in force.

The manufacturers, and in fact every owner of property, should insist on a proper inspection. Only by this means can rates be equitably fixed. The person with a good risk should not be made to help pay for his neighbor with a poor one. Rates should not be fixed on certain risks as a class, or on certain districts as a whole, but each risk should stand on its own merits. The inspection should be scientific and the recommendations definite. Owners will never respect an inspection which is otherwise.

REMEDY PROPOSED.

The above conditions have convinced your Committee that the Association should commence in a modest way to mitigate some of the most objectionable features here discussed. In proposing a remedy we believe that it will be welcomed by all parties interested.

Insurance is after all a mutual arrangement. One man's premiums are taken to pay another's man's losses. Our proposal is that we organize for the purpose of collecting premiums and paying losses; and that we collect the premiums on the basis of scientific inspection. Our suggestion aims to eliminate commissions, reduce expenses and return profits to policy holders. We have considered a possible method of putting our proposals and suggestions into practical shape by organizing an insurance department of the Association, to be conducted along the following lines:—

BUSINESS POLICY.

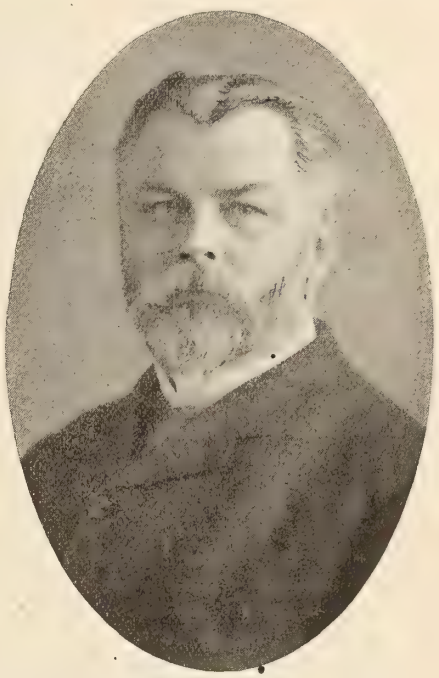
The Department shall be controlled by a Standing Committee of the Association to be known as the Insurance Committee which shall report monthly to the Executive Council, and annually to the Annual Meeting. The Committee shall be composed of twenty-one members. Seven members of the Committee shall be elected at each Annual Meeting, and hold office for three years, and shall be eligible for re-election. In centres where there are eight or more members of the Association, Advisory Committees shall be organized at the discretion of the Insurance Committee.

Object.

The Department shall be organized to carry on the business (a) of mutual fire insurance, and (b) of insurance brokers.

Scope.

1. In order to increase the desirability of the policies issued by the Department, as many risks as can be obtained (provided they are satisfactory to the Department) will be accepted. No manufacturing risks will be accepted unless the manufacturers are members of the Canadian Manufacturers' Association. All warehouse, dwelilng, and non-manufacturing property irrespective of ownership will be insured under the same conditions as manufacturing risks.



JAS. P. MURRAY,
Chairman Special Fire Insurance Committee.

Approved by Committee.

2. Every risk before being insured by or with the Insurance Department must be approved of by the Insurance Committee.

Rate of Premium.

3. To avoid the necessity at the outset of an expensive inspection department the rate of premium charged will be the same rate as is charged at the time the insurance is effected by any company that is acceptable to the Committee, and the usual conditions regarding co-insurance will also be adopted.

Inspection.

4. The Department will aim among other things to encourage the insuring public to protect their own property, and as an inducement, sprinkled and properly protected risks will receive special consideration.

Re-Insurance.

6. In addition to the insurance carried by the Department, arrangements are expected to be made with several first-class Canadian, English, and United States companies, whereby an insurance amounting to several times the amount carried by the Department may be placed. The commission on this insurance will be credited to the Department to increase the fund available for losses.

Guarantee.

7. In addition to the cash premium paid to the Department, the policy holders shall also bind themselves by the acceptance of a policy to be responsible for all losses suffered by the Department over and above the amount of premiums collected to an amount sufficient to make the policies absolutely safe.

Agents' Commissions.

8. No agents will be employed by the Department. The insurance will be secured through the head and branch offices of the Association, and through the individual efforts of the interested members.

Reserve Fund.

9. The Department will at the end of each year set aside a percentage of profits to be decided upon for a reserve fund to increase the security and lessen the guarantee of policy-holders.

Return of Premiums.

10. The Department will return on the expiration of each policy all that part of the premium paid which has not been expended for losses, expenses, or held for a reserve fund.

Beginning of Business.

11. The Department will begin business just as soon as it has insurance contracted for to the amount of $1,000,000, provided that legal authority has been obtained by that time. An effort will be made to have in addition to this $1,000,000, a large amount of insurance to place in other companies, on which the Department will receive a commission.

ESTIMATED FINANCIAL STATEMENT.

Figured on the basis of $5,000 on each risk; one-half of which is carried by the Department on its own account.

Revenue Account.

Risks carried		$1,000,000
Risks re-insured		1,000,000
		$2,000,000
Premium at 2 per cent. (which is below the average paid at present)		$40,000

Expenditure.

Premium on $1,000,000 re-insurance at board rates less 20 per cent.	$16,000	
Expenditure, 15 per cent. on business carried	3,000	
5 per cent. on business re-insured	1,000	$20,000
Balance		$20,000

This estimate gives the Department on $1,000,000 net insurance a net premium of $20,000

To the stock companies doing business in Canada to-day, the net premium income on $1,000,000 at 2 per cent., less 35 per cent. for expenses (which is less than the actual figure) would be 13,000

Balance in favor of the Department..... $7,000

On the small amount of $1,000,000 of insurance with $1,000,000 re-insurance and with no single possible chance of loss exceeding $2,500, and with all figures estimated to the disadvantage of the Department, there would be at the Department's disposal for losses, $7,000 more than the stock companies have on the same insurance; this surplus is strengthened, and the insurance made absolutely safe by the guarantee of the policy holders.

Estimating the losses to be $13,000, the amount available to hold as a reserve, or to return to policy holders, would be $7,000, or 17½ of the total premiums.

Thus to the holder of a policy of $5,000, issued by the Department at 2 per cent., the Department would be able to return $35. The policy of the Department, however, would be to gradually accumulate a reserve fund.

MUTUAL INSURANCE.

The remarks of Mr. Edward Atkinson, President of the Boston Manufacturers Mutual Insurance Co., and a recognized authority on mutual insurance, made before the Furniture Association of America, with reference to the dangers of Mutual Companies, are of interest. These remarks are published in the "American Industries," of August 1st, 1904.

"The danger point in starting a Mutual Company is at the beginning, when the annual premium may be exhausted by a single total loss. When the company has reached an annual premium equal to two total losses, it has got a much safer position, and when under conservative and careful management it has secured an annual premium equal to three total losses of three separate risks, it is safely established, and may then go on writing larger and larger lines and increasing its annual income to four total losses of single risks. Under conditions of annual income equal to three or four total losses of single risks, one company may as safely write one hundred thousand dollars on one risk as it had heretofore written ten thousand dollars."

Your committee recommend that you to-day appoint a Fire Insurance Committee as outlined herein, and give that Committee power to take such steps as are found necessary to secure authority from the Dominion Government to organize and to conduct an insurance business, following as closely along the lines outlined herein as may be deemed expedient.

All of which is submitted.

J. P. MURRAY, Chairman. J. F. M. STEWART, Asst. Secretary.

After a careful discussion, somewhat limited by the space of time at the disposal of the convention, the following resolution was unanimously adopted:

"That the Executive Council of the Association be authorized to consult the branches of the Association and to appoint a Fire Insurance Committee as outlined in the report, to prepare a plan for fire insurance, and submit the same to the Executive Council for approval, no plan to be considered which in any way affects the funds of the Association."

TRADE WITHIN THE EMPIRE.

Mr. Ballantyne: I do not think we can adjourn our annual meeting without this Association again expressing themselves with regard to the Hon. Joseph Chamberlain's policy of preferential trade within the Empire. I am sure, gentlemen, that every member of this Association and Canadians generally are very much in favor of the Hon. Joseph Chamberlain's policy. I will not take up any time in making any special remarks myself except I would like, Mr. President, to have the honor and privilege of moving the resolution which I will now read:

"That whereas, the events of recent years, industrial, political and international, indicate that the future strength and safety of the British Empire depend upon the closer union of all its parts; and whereas, the time has come when the Mother Country and the colonies should extend to one another some practical expression of such union; therefore be it resolved, that this Association in convention assembled reaffirms its belief in an imperial trade preference, and favors the appointment of an imperial commission representing all British dominions, who shall consider the whole question, and submit a plan for the consolidation and permanency of the Empire and its trade."

Mr. President and Gentlemen, I take very much pleasure in moving this resolution.

Mr. Robb: I have very great pleasure in seconding that resolution. It does not require any remarks whatever. I think it is clothed with the ideas of all our members, and that it will receive their unanimous support.

Mr. Munro: I see no reference either to Mr. Chamberlain or the Prime Minister, Mr. Balfour, in the resolution at all. The resolution is in favor absolutely of an Imperial Commission representing all the British dominions who shall consider the whole question and submit a plan for the consolidation and permanency of the Empire. That is a great, broad question, and it seems to me to be written on very broad lines without regard to any difference of opinion there may be among certain parties.

Gentlemen, I am sure we all feel glad that this has been drafted on such very broad lines, and I hope we will send a thoroughly cordial and unanimous vote in favor of this resolution. (Applause.)

The President put the motion, which, on a rising vote having been taken, was declared carried unanimously, and three cheers were given for the resolution.

REPORT OF THE NOMINATIONS AND RESOLUTIONS COMMITTEE

The President called upon Mr. Younge to present the report of the Resolutions Committee.

Mr. Younge presented the report of the Resolutions Committee and said: The first resolution is that presented by the Nominations and Resolutions Committee itself respecting the annual meeting of the Association. The following recommendations are made to the annual meeting:

1. Special Officers.

(1) That Vice-Chairmen should be appointed for the various Standing Committees of the Association.

(2) That the present Nominations and Resolutions Committee be appointed a special committee to consider and recommend to the Executive Council a system under the control of a standing committee for dealing with all the business and arrangements connected with the annual meeting of the Association.

Mr. Thorn: The understanding arrived at by the committee at the last meeting was that the chairmen of the branches would be added to that committee that has just been named.

Mr. Younge: Mr. President, I would like to explain the resolution brought in to the Nominations and Resolutions Committee provided for a committee upon which the chairmen of the branches should be members; but that committee, as I understand it, decided that the present Nominations Committee should be a committee to recommend a new system whereby the annual meetings would be controlled. Am I right in that?

Mr. Robb: That is correct.

The President put the motion to adopt the resolution, which, on a vote having been taken, was declared carried.

2. Tariff on Woollens.

Whereas, the slight increase made at the last session of the Dominion Parliament in the net tariff on certain lines of woollen goods is altogether insufficient to redeem the Canadian woollen industry from the serious condition into which it has lapsed, many of the mills being in a more helpless and unsatisfactory condition to-day than ever before;

And whereas, the general conditions of the industry have not improved since the slight increase has been effected. The competitors of the Canadian mills are reducing prices, which more than counterbalances the benefit of the tariff change, and the importations, especially in lines of cheap cloths, continue to increase;

And whereas, the greatest difficulty is experienced in securing and retaining with the wages available even the limited number of workers necessary to keep a part of the mills in operation. Therefore be it resolved:

(1) That the Woollen Section of the Canadian Manufacturers' Association requests the Association assembled in annual meeting to bring the strongest pressure to bear upon the Dominion Government to grant a sufficient increase to afford relief.

(2) That this increase should be made at once if the industry would be saved.

(3) That it should apply not only to certain lines of woollen cloths, but equally to all classes of woollen goods manufactured in Canada. Carried.

3. Government Control of Telephones.

That the accompanying resolution commending Government control of the telephone service in Canada be commended to the Parliamentary Committee of the Association for consideration and report. Carried.

4. Technical Education.

Whereas, the importance of technical education to the manufacturing industries warrants and requires the establishing of modern, thoroughly-equipped technical schools throughout Canada;

And whereas, the instituting of a general system with one standard curriculum requires that all the schools should be under one central management;

And whereas, it is the function of the Federal Government alone to properly organize such a system of schools throughout the Dominion.

Therefore be it resolved, that the Association should, through a special committee, investigate the subject of technical education as it is dealt with in other countries,

with a view to recommending early action on the part of the Dominion Government in inaugurating a national movement for a standard system of technical education in Canada. Carried.

5. Resolutions of Thanks.

"Resolved, that the heartiest thanks of this convention be extended as follows:

(a) To the Arrangements Committee and the members of the Montreal Branch for their magnificent welcome, and for all the entertainment they have provided for the delegates;

(b) To the President and Mrs. Drummond for their kindly invitation to Mount St. Bruno;

(c) To the Board of Harbor Commissioners of Montreal for their delightful reception to the delegates on Tuesday afternoon;

(d) To Rev. Dr. Barclay for his kindly presence and assistance at our Opening Session;

(e) To His Worship the Mayor and the Corporation of the City of Montreal for the civic courtesies extended to the delegates and for the splendid parade of the Fire Department;

(f) To the telegraph and telephone companies for the privileges of their lines;

(g) To the railway companies for their special rates;

(h) To the Montreal Board of Trade, the Shawinigan Water and Power Co. and the Canadian Pacific Railway Co. for their kind invitations to visit their premises;

(i) And last, but not least, to the Grand Trunk Railway Co. for the special train provided for those delegates who wish to return westward immediately on the close of the convention. Carried, with applause.

MR. GEORGE FOR PRESIDENT.

The Secretary: The Nominations and Resolutions Committee beg to present the following report on nominations: "For President, Mr. W. K. George, of the Standard Silver Company, Toronto."

(This announcement was followed by three cheers for Mr. George and the singing of "For He's a Jolly Good Fellow.")

Mr. George: Mr. Chairman and Gentlemen, it is with feelings of a character that are very deep that I accept at your hands the honorable office of President of this Association, and I appreciate that honor, fully recognizing as I do that such an office in this Association, the strongest and most representative body of men in the Dominion of Canada is an honor high enough for the aspirations of anyone; and believe me also, gentlemen, when I say that it is with no vain-glorious feelings, because I recognize at the same time most acutely how far the office transcends the capabilities of him whom you have this day honored with your choice. I can but promise, gentlemen, that in the future, as I trust it has had in the past, the work of this Association will have my loyal and earnest support. I am following Presidents who have been an honor to our Association and a credit to our country—(Applause)—and I feel, and feel deeply, the responsibility which devolves upon me in attempting to follow worthily in their footsteps. I ask of you, gentlemen, and I ask it with confidence, knowing full well it will be granted, for the same loyal and generous support which you have accorded to my predecessors.

Our organization is now national in its importance; its sphere of influence extends from coast to coast; its power for usefulness is greatly enhanced in the upbuilding of our country, in the development of our industries, and in the utilization of our vast natural resources, and lastly, but I think chiefly, gentlemen, in the work of unification of this Dominion of ours in the drawing together of the far distant parts in bonds of friendship and mutual interest. You cannot show me anyone that went with us to Halifax two years ago, down to the eastern sea, nor can you show me one who went far to the west across those fertile fields and over those magnificent mountains to Victoria—you cannot, I say, show me one amongst all those who has not a warmer and kindlier feeling in his heart for his fellow Canadians, who is not more ready to help them fight their battles and bear their burdens, and become thus more truly loyal and patriotic Canadians, realizing, and, therefore, filled with more enthusiasm for the glorious heritage which has been left to us for development, and determined more in the future even than in the past to aid by all in his might in the development and in the advancement of the country. Therefore, gentlemen, we are entitled to say, I think, that in all these features our Association is a factor of prime importance, and it is a proud and honorable thing for each of us to feel that to us is given an opportunity of sharing in such a work.

In the public mind I think I am justified in saying our Association is rapidly gaining in esteem as the fairness of its spirit, the broadness and patriotism of its motives and the bona fides of its intentions are being more fully recognized; and it will be for you, gentlemen, not only to maintain but to advance that position. The work before the incoming Executive is most important. Questions of almost vital interest to the manufacturing industries will have to be considered. Let us be careful and conservative in our judgments and in our deliberations; let us at all times endeavor to be fair-minded and broad in those recommendations, and as we are just, to that extent will the influence and power of this Association grow. We want every member of this Association to make use of it. There is no member from the Atlantic to the Pacific so small in a commercial sense that his recommendations and wishes will not receive the same full, fair and just consideration by the committees or by the Executive Council that any recommendation or wishes sent in by the most influential member of this Association will receive. If all our members would only appreciate that fact the Association could be of greater service to each.

We would like to start in on the coming year with the intention of making it a record-breaker in the work of this organization. I know that is a very heavy undertaking, and I would like to have the Executive assist me, and I know they will. But we want more than the assistance of the Executive. We want the assistance of every individual member of this Association. We want all of you, and I ask each and every one of you to act as canvassers for the membership of this organization. You could reach many men that the Executive cannot come in touch with, and in many cases it would require simply a word from you, pointing out the benefits which you know are brought to the manufacturers through their connection with this Association, to bring in more members to our organization. We all feel, and I know you realize, that we want the moral support of them all. The greater our membership the more influence we can exert. We want not only their moral support; we will be glad to have their financial support. The greater our revenue the more work we can do. I, therefore, wish to impress upon you once more that you can aid in the upbuilding and developing of this Association if you will constitute yourselves canvassers for membership among the manufacturers whom you know do not at present belong to the organization.

Gentlemen, once again I thank you from the very bottom of my heart for the great honor which you have done

me in electing me to the proud position of President of the Canadian Manufacturers' Association. (Applause.)

MR. BALLANTYNE FOR VICE-PRESIDENT.

The Secretary: The report continues, Mr. President and Gentlemen: Nomination for First Vice-President, Mr. C. C. Ballantyne, The Sherwin-Williams Co., Montreal. (Applause.)

Mr. Ballantyne on rising to speak was greeted with three cheers and a tiger. He said: Mr. President and gentlemen, I wish to thank you very much, indeed, for again appointing me to the very honored and high position in this Association of First Vice-President. Some of you may not be aware that in the year 1900 a similar honor was conferred upon me, and I take it as an additional honor when you have re-elected me by acclamation to the position of First Vice-President for the incoming year of 1905. When I was First Vice-President in 1900 our Association only had a membership of about 132 if I remember rightly, and it is a source of great satisfaction to me, as it must be to you all, to know our membership has grown since 1900 from 132 to over 1,500 members.

Our worthy President, who has just taken his position, has referred to the very able Presidents that have preceded him, with which I heartily concur, but I feel somewhat in the same position in taking the office that you have given me as First Vice-President of this Association, following after such an able First Vice-President as my friend, W. K. George. All I can say to you is that I will try to fulfil my duties as ably and as much to your satisfaction as my friend, Mr. George, has done. I thank you, Mr. President and gentlemen, again, and all I can say further is that I will do my utmost as in the past to further the interests of the Canadian Manufacturers' Association. (Applause).

PROVINCIAL VICE-PRESIDENTS.

Secretary: Ontario Vice-President, Mr. J. O. Thorn, of the Metallic Roofing Company, Limited, Toronto. (Applause.)

Mr. Thorn: Mr. President and Gentlemen, I assure you I greatly appreciate the honor you have done me in electing me to the position of Ontario Vice-President. It is certainly very pleasing to know that one's efforts on behalf of the Association are appreciated by the members. I have merely tried to do my duty, and I hope to be able to continue to do so in the future. I have one hobby in connection with this Association that I would like to get your assistance in connection with, and that is to make it stronger than it is to-day, and to very materially extend its membership. Every member can assist in that. It is really a very easy matter to get members into the Association now, compared with what it was a few years ago, and I would especially appeal to every member of the Association to try and bring in *one* additional member. I speak with some experience on the subject, because, without going out of my office during two years I have brought in, I think, eighty-seven members, and I am sure every one can bring in one additional member. I again thank you for the great honor you have conferred upon me. (Applause.)



W.K. GEORGE
President



C. C. BALLANTYNE
Vice-President

THE ASSOCIATION'S CHIEF OFFICERS, 1904-1905

Secretary: Quebec Vice-President, Mr. George E. Amyot, of the Dominion Corset Company, Quebec. (Three cheers.)

Mr. G. A. Vandry: Owing to Mr. Amyot's absence I wish to extend my thanks to the Association on his behalf. I am sure Mr. Amyot will greatly appreciate this honor, and I also am sure that the members of the Quebec Branch will all be delighted.

Secretary: Nova Scotia Vice-President, Mr. D. W. Robb, of the Robb Engineering Company, Amherst. (Applause.)

Mr. Robb: Mr. President and Gentlemen, I thank you very much, I am sure, for the kindly re-election. I have held the office continuously now for a number of years, and it seems to me hardly fair; I think it should be passed around. I am only too happy, I assure you, to act; and I just wish to say here that I believe this Association has done as much, and perhaps more, than any other institution which I know of to bring the east and the west and the middle together. The fact of the Association going to Halifax and going to Vancouver rouses the people more than anything else in the industrial line, and for that very reason I advocated yesterday very strongly visiting Great Britain. The personal contact of the people in that way does more for a country to bring it and hold it together, and it will do for an Empire more than anything else you can possibly do. If you can get two or three or four hundred Canadians going to England, it will do more to educate the English people as to what Canada is doing than anything else that has been done. I thank you very much.

Mr. Murray: I don't think it is generally known that Mr. Robb was instrumental in establishing the first branch of the Association in Halifax in the fall of 1900. (Applause.)

Secretary: British Columbia Vice-President, Mr. John Hendry, of the British Columbia Mills Timber and Trading Company. (Applause.)

Manitoba Vice-President, Mr. Edward L. Drewry, of Winnipeg. (Applause.)

New Brunswick Vice-President, Mr. W. S. Fisher, St. John. (Applause.)

Prince Edward Island Vice-President, Mr. Bruce Stewart, of Bruce Stewart & Company, Charlottetown. (Applause.)

MR. BOOTH RE-ELECTED TREASURER.

Treasurer of the Association, Mr. George Booth. (Applause and the singing of "For He's a Jolly Good Fellow.)

Mr. Booth: Mr. President and Gentlemen, I sincerely thank you for this renewal of your assurance, confidence and trust. It is a good many years you have done me this honor, and I do not forget it, but at the same time I cannot forget our officers and our office work. It is of them, who have made the duty very light, as I told you last year, and of Mr. G. M. Murray, whom I have come most in contact with this year, I want to say a few words of praise. We have been very fortunate with all our office-bearers; they have been a great deal above the ordinary, from the General Secretary right down. Mr. Murray at all times when I desired any details has been very courteous, and I have had no trouble in getting them. I want to re-assure the members of what was said yesterday when there was some little fear that we had something in our annual reports which we did not want made public. There is not now, and never has been a dollar spent in the Association that the public could not know about. I do think, and I have stated it before, that the Treasurer of the Association should be compelled to give a bond. I am not alluding to myself, but to someone who will succeed me. (Laughter.) There are times when the Treasurer does have to use his own name to get out a little money, and he should not be allowed to do it. Don't think you are treating me with any discourtesy, because it is my wish. I would like to see the by-laws amended to that effect.

Mr. President, I thank you very kindly for the renewal of your confidence.

Mr. Kemp: I am very proud to be able to support Mr. Booth. I think this is for the twentieth time.

The Secretary read the list of representatives for the Executive Council, except the Ontario representatives standing for election, the results of which he stated would be announced at the banquet.

The President: Gentlemen, you have heard the nominations made for the Executive Council. Is it your wish to approve of these? There is one ballot on the Ontario representatives. The others are practically by acclamation. (Carried.)

Mr. Thorn: I desire to draw attention to what I think is an important oversight, and that is the fact that you have just elected Mr. Cockshutt, of Brantford, Chairman of the Railway and Transportation Committee, and you have not his name as representative for the Province of Ontario. The result will be that he will not have a seat on the Executive Council unless you put his name on this ballot and elect him.

The Secretary: The President draws my attention to the fact that that is provided for in the by-laws.

The Secretary announced the members of the following Committees: Railway and Transportation Committee, Parliamentary Committee, Industrial Canada Committee, Commercial Intelligence Committee, Tariff Committee, Reception and Membership Committee, and Exhibition representatives at Toronto, Ottawa and Winnipeg.

The Secretary: I would suggest that the recommendations made by the Local Branches in electing their officers be approved as contained in this committee's report. Carried.

MR. DRUMMOND THANKED.

Mr. McNaught: Mr. President, although we have been glad to welcome you to the presidency of the Association, we cannot forget the gentleman who has just retired; and I am sure I voice the sentiments of every gentleman present when I say that we are proud of the way in which the affairs of the Association were administered last year. (Hear, hear.) We are also proud of the way in which our President represented this Association on the other side of the water last summer. (Applause.) We know he did himself credit, and he not only did that, but he brought this Association to occupy a higher level in the Mother Country than it ever did before, because they got to know us better, and I think respect us more.

Without taking up any of your time I want to move that a cordial vote of thanks be tendered to the retiring President, Mr. Drummond, and that the Executive Committee be instructed to procure and present to him on a suitable occasion a fitting testimonial in appreciation of his services. (Applause.)

Mr. Birge: I am very glad to second that motion. I know something of the work Mr. Drummond has done, and I followed with a great deal of interest what he did on the other side of the Atlantic in the interests of Canada as well as of this Association. I have great pleasure in seconding the motion.

President George: I rise to put the motion. I am sure it voices the sentiments of every one in the room. It is with peculiar pleasure I put this vote of thanks to the meeting. Mr. Drummond has made a host of friends from Halifax to Vancouver. He has earned the esteem and

regard of everyone throughout the length and breadth of Canada with whom he has come in contact; and more than that, he has won, I am justified in saying, from those with whom he has come in closest contact their lasting affection. Gentlemen, I put the motion, and I ask you to show your acquiescence in it by a standing vote and by three hearty cheers.

The President's request was complied with amid great enthusiasm.

Mr. Drummond: Mr. President and Gentlemen, I thought you were about tired of hearing my voice. (Voices: No, no.) I just wish to say the train leaves at one o'clock from Bonaventure Station, and I hope you will all be there on time.

I wish to say again, thank you. I acknowledged my thanks to everyone, I think, in connection with this great organization on Tuesday night. I would like to rest just there and say again only this, how much and how deeply I have appreciated the opportunity for good work that the high office of the presidency of this Association afforded. How deeply, more deeply still, I appreciate the many friendships I have formed since I became your President! I have had to stand, of course, the usual misunderstandings and abuse from newspapers, some of them a little jaundiced in color; but a man ought to be able to stand that kind of thing, and I feel I can speak for my friend, Mr. George, who comes in after me (and I know he will fill this Chair far better than I have ever been able to do it). I can speak for him, too; he cares very little about what some of the newspapers said about us in the West last year. I think I can say for Mr. George what I can say for myself with a clear conscience, that whatever we have done we have tried to do for the good of our country, Canada. Only last night I read a criticism of the figures which I placed before you on Tuesday night—a very severe criticism—in one of the papers here. All I can say is that those figures which I quoted are figures certified to by the Chief of the Census Bureau in Ottawa, and they represent truly what the great industrial interests of this country are to-day. I think that papers that call themselves Canadian should not belittle the great industrial life of this country. (Hear, hear.) I think I speak for every one of you. Those figures can be verified by anyone communicating with Mr. Archibald Blue at Ottawa.

There is the question of the future of this country. Let us have confidence in it. We have the coming country of the twentieth century. Nothing can stop it if we only have faith in ourselves, and if we are loyal to ourselves and the old Empire. I thank you very much, indeed, for this fresh expression of your confidence. (Applause.)

THE SECRETARIES THANKED.

Mr. Ballantyne: There is one more vote of thanks which I wish to move at the present time, and that is to ask you to accord a hearty vote of thanks to the Secretaries of this Association—(Applause)—from the able General Secretary down to all the Branch Secretaries. They have all done their duty nobly and well, and this Association is very proud of them. I have very much pleasure in moving a hearty vote of thanks to the Secretaries.

Mr. Murray: I have much pleasure in seconding the vote of thanks to the Secretaries. They have done their work as well, if not a little better, than they have ever done it before. (Applause.)

The President: This motion is one which we can all agree with. It seems to me there has been something almost more than human in the perception with which we have selected our Secretaries.

(The motion was carried with applause.)

Mr. Younge: Mr. President and Gentlemen, in responding to your very kind expression of thanks, I represent at least twenty persons. We have upon the staff at the present time twenty salaried persons, from the Secretary down, including the office boy. I can only say, gentlemen, that the work which we have done has been of a very important character, and we have endeavored throughout the year to recognize its importance. I feel that I speak for every member of our staff when I say that we have approached the work conscientiously. While we feel we have but been able to act on behalf of the industries of this country and



F. M. ROBERTSON,
British Columbia.



E. H. COOPER,
Montreal.



J. E. WOOD,
Nova Scotia.



JOSEPH PICARD,
Quebec.



J. F. M. STEWART,
Toronto.



C. N. BELL,
Manitoba.

THE BRANCH SECRETARIES

the great interests represented in this Association in an imperfect manner, we have at least tried to do our duty. There has always been behind us the splendid encouragement and support of a body of representative men, the like of which I believe I am safe in saying does not exist in any other organization in any other country. The men upon our Executive Council, one hundred in number, gathered together from every Province in the Dominion, and representing every manufacturing interest in Canada, are a body of men capable of holding in their hands the destinies of this Association, and I feel that the interests of your industries are safe in their hands.

I can only ask that the support which has been given to us in the past shall be extended in the future, and I promise you on behalf of myself and every member of the staff the very best services that we can command. I thank you very much. (Applause.)

THANKS TO THE PRESS.

Mr. Birge: There is another vote of thanks I would like to move—one which will meet with a hearty reception from this convention—that is a vote of thanks to the Press for their kindly treatment of us and for the reports they have given of our Executive meetings and our conventions. The President has referred to the fact that sometimes they meet his actions and those of the assistants with criticisms. The officers of the Association have always been willing to accept criticism. The membership of the Association itself is willing to accept criticism. In fact, we court fair criticism on all hands, and, on the whole, we have had that from the Press. With very few exceptions they have treated us with the utmost fairness. For that treatment and for their kindness and courtesy in the past I move that a hearty vote of thanks be given to the Press.

Mr. Drummond: I would like to second that. I think in the Press of Canada we have something to be proud of, with its pure, good and patriotic tone. They are fair to us as a whole, and they recognize that as Canadians we have been trying to do the right thing. I have pleasure in seconding the motion.

The President put the motion, which was carried amid applause.

QUEBEC FOR 1905?

Mr. G. A. Vandry: With regard to the next annual convention, I do believe the City of Quebec should be chosen as the place. (Hear, hear.) I regret the time is so short or I could very easily convince every member that Quebec is the only place which you should choose, but as we have to take the train at one o'clock I would simply move that Quebec should be chosen as the place for holding the convention next year.

Mr. Drummond: I would like to second that, and to say that we never shall forget the splendid, the princely reception Quebec gave us as we passed through there on our way to Halifax. (Applause.) Small in number, the Quebec Branch had at that time only twenty or thirty members; yet they gave us a splendid reception which we never shall forget. Another point in favor of Quebec is that I hope next year we shall go to England, and we can sail from the good old port of Quebec. (Hear, hear.)

Mr. Thorn: I am sure the new Executive Council would be very glad to consider the claims of the City of Quebec for the next annual convention, for, according to the by-laws, it is a matter which really should be decided by the Executive Council. I would, therefore, suggest that it be left to the Executive Council to consider and decide upon at a later date.

The President: The kind words of the Chairman of our Quebec Branch having been accepted as an invitation, would it meet with your approval that the invitation be referred to the Executive Council for action at a later date?

Mr. Vandry: We have no objection to that at all.

The President: We will consider an invitation from Quebec because we know how cordially it comes. I think if it is left to the Executive Council we will meet in Quebec next year.

Lieut.-Col. Burland: There is one other vote of thanks, and that is to the Executive Council for their labors during the past year. The Secretary has characterized the Council in such terms as to require it. I have very much pleasure in moving a hearty vote of thanks to these gentlemen for their labors during the year.

Mr. J. M. Gill: I second the motion. (Carried, with applause).

The President: I think that concludes the business. The train for Mount St. Bruno leaves at one o'clock, but Mr. Younge has an announcement to make, and I do not want you to leave the room without singing "God Save the King."

The Secretary having announced particulars regarding various convention arrangements, the convention closed at 12.45 p.m. with the singing of "God Save the King."

"AT HOME" AT DONNACONA LODGE

The business sessions over, the convention party to the number of about one hundred and fifty left Bonaventure Station, in a special train provided by the Montreal Branch, for Donnacona Lodge, the summer residence of Mr. and Mrs. George E. Drummond, situated at Mount St. Bruno, about twenty miles from Montreal.

The trip to Mount St. Bruno was enlivened with the music furnished by two stalwart Highland pipers, supplemented by the singing of popular songs and shouting the "Made-in-Canada" cry that a year before heralded the approach of the manufacturers all the way to the Pacific Coast.

Carriages met the train and conveyed the party along two miles of good country road to the seigniory of St. Bruno, in the centre of which is situated Donnacona Lodge. This seigniory has a history of its own, dating back to a grant made by the King of France. It consists of about 1,700 acres, the most of which has been consigned to nature for its keeping. The residences of Mr. Drummond and the other owners of the estate, Mr. T. J. Drummond, Mr. E. L. Pense, and Mr. B. Hal Brown, are on a little height of land, on either side of which are delightful fresh water lakes.

Mr. and Mrs. Drummond received their guests on the verandah of their beautiful home, and without delay invited all to partake of the repast that had been prepared for a truly hungry crowd.

Mr. Richard A. Donald, Toronto, on behalf of the visitors, moved a very hearty vote of thanks to Mr. and Mrs. Drummond. This was seconded by Mr. P. W. Ellis, Toronto, and was received with rousing cheers. Mr. F. Hastings Medhurst, London, England, and Hon. J. D. Rolland, Montreal, made short addresses.

After the speech-making, a photograph of the party was taken underneath a Union Jack, which was held in place on the flag-pole by Mrs. Drummond. The photo was decidedly Canadian and was in perfect accord with the surroundings and the truly Canadian welcome that was extended to all.

Until five o'clock the sightseers strolled over the estate. A book could be written describing its beauties. The expressions of delight heard everywhere only served to impress on one the inadequacy of any description. Donnacona Lodge must be visited: it cannot be described. The warmth of the reception must be experienced to be understood: it was truly and handsomely Canadian.



A BUSY CORNER OF MONTREAL HARBOR

THE CONVENTION BANQUET

Brilliant Function in the Windsor Dining Salon — Imperial Trade Preference the Keynote of the Evening — Patriotic Sentiments Evoke Tremendous Enthusiasm

The Convention reached its climax in the Banquet held on the evening of the closing day. In the spacious dining hall of the Windsor Hotel the tables were laid for four hundred and fifteen guests, and every place was filled. The good-fellowship and enthusiasm of the great Convention was apparent everywhere, and the speeches delivered were radiant with optimism and patriotism.

The occasion was graced by the attendance of many of Canada's most noted public men, and a strong Imperial tone was introduced in the presence of Sir Howard Vincent, of London, and the Hon. R. H. McCarthy, of Trinidad.

The sight presented from the gallery was one long to be remembered. The head table, presided over by the President Elect, Mr. W. K. George, extended across the length of the large room, and was met horizontally by ten tables, each presided over by a Vice-Chairman. To the President's right sat the Right Hon. Sir Wilfrid Laurier, and to his left, Sir Howard Vincent.

Others at the table of honor were:

Sir Lloyd Wise, Hon. George W. Ross, Hon. R. H. McCarthy, Hon. George E. Foster, Hon. Wm. Paterson, Mr. F. D. Monk, Hon. Raymond Prefontaine, Hon. J. D. Rolland, Sir Alexander Lacoste, Senator Dandurand, Rev. Dr. Barclay, Principal Peterson, Messrs. George E. Drummond, C. C. Ballantyne, Robert Bickerdike, W. K. McNaught, F. H. Medhurst, J. G. H. Bergeron, W. F. Cockshutt, A. O. Brault, George Booth, C. A. Birge, Robert Meighen, J. J. McGill, Peter Lyall, Arch Blue, John Bain, F. B. Polson, and Robt. Munro.

It was about eleven o'clock when the Chairman rose and, calling the immense audience to order, asked the Secretary to read the letters of regret that had been received.

The Secretary: Among others, regrets have been received from the following: Lord Strathcona and Mount Royal, Sir Alfred Lyttleton, M.P., Sir John Colomb, M.P., W. Hayes Fisher, M.P., Chief Justice Sir William Ralph Meredith, His Worship the Mayor of Montreal, the Hon. Senator McKay, the Hon. W. S. Fielding, the Hon. Charles Fitzpatrick, the Hon. L. P. Brodeur, the Hon. Charles F. Hyman, the Hon. J. I. Tarte, Mr. R. L. Borden, M.P., the Hon. S. N. Parent, the Hon. J. W. Longley, Mr. E. S. Clouston, Sir W. S. Van Horne, Sir Thomas Shaughnessy, Mr. Charles M. Hayes, Mr. William Mackenzie, Mr. W. I. Gear, Mr. George Hadrill, Mr. W. S. Fisher and Mr. John Hendry.

President George: Gentlemen, my first duty, as well as my first action, in connection with the toast list to-night is to offer you that toast which has always been received loyally and enthusiastically throughout the length and breadth of the British dominions. It is not entirely for sentimental reasons, but because we have the greatest of love, the greatest respect, for the personality of him who sits on England's throne. I give to you the toast of His Majesty the King.

The guests rose and sang the National Anthem.

PRESENTATION TO MR. BIRGE.

The President: Gentlemen, I am now going to call on Mr. Younge, the Secretary of the Association, to perform on behalf of the Association the very pleasant duty in presenting to former President Birge a testimonial of appreciation from the members of the Association.

Mr. Younge read the testimonial, which consisted of a handsomely engraved address, bound in black morocco, after which he handed the volume to the President, who in turn placed it in the hands of Mr. Birge.

Mr. Birge: Mr. President, Mr. Younge, Guests and Members of the C.M.A.,—For once in my life I propose to be witty. It is said that brevity is the soul of wit; I propose to be brief. There are many things that I would like to say unto you, brethren, but on account of the large array of speakers here this evening whom you are anxious to hear I shall be very brief, indeed.

Just let me say this word. I have been a member of the Manufacturers' Association for a good many years, during its infancy and its early years, and I felt that it was an honor to be a member of the Association in those early days. I felt that it was an honor to be a member of the Association four or five years ago when it sprang from youth into vigorous young manhood, and when two years ago in Halifax you did me the honor to confer upon me the highest position which it was in your power to give in connection with this Association, I felt it was an honor, indeed, of which any man might well be proud, and I was glad to accept at your hands the position of President of this Association. When a year ago I laid down the cares of office—I believe that is the proper parliamentary expression—I felt again, sir, that it was an honor to have been President of this Association, when this Association gave kindly expression to their appreciation of the efforts, whatever they may have been worth, that I had put forth during the year of my presidency. And now to-night I again feel that it is, indeed, a high honor when in this public manner you have given to me this testimonial of your appreciation of the feeble efforts which I was able to put forth during my year of office.

Gentlemen, I cannot forget that year of office; it was a matter of education to me, a matter of help to me, and if I was in any way helpful to the Association I can only say I was glad of having had the opportunity to serve the Association to the best of my ability. I regret very much that I was unable to give to the Association better service than I gave, unable to accept of the offer of transportation to the Colonies of South Africa and Australia, there to investigate the possibilities of increasing our export business, but the demands of my own business were such I could not do it. But, gentlemen, I have done the best I could, and you have to-night passed judgment and been so kind as to say, "You have done well." Gentlemen, I thank you from the bottom of my heart, and whatever service I can give to the Association in the future will be given as freely as in the past. (Applause.)

MR. W. K. GEORGE

Right Hon. Sir Wilfrid Laurier, Sir Howard Vincent, Honorable Ministers and Gentlemen,—It is not my intention to trespass on your time this evening by any lengthy remarks. But at this the first public function at which I have had the honor of presiding as President of the Canadian Manufacturers' Association, I would like to have your attention for a short time while I touch on some of the aims, and some of the hopes of this Association. I will try to be brief, because we have with us to-night speakers whom we are all anxious to hear.

At the outset, let me say that I want to speak simply—to confine myself to facts, and to avoid theory. Our Association is a non-political organization with a membership extending from Sydney on the East, to Victoria on the West, embracing practically all the leading manufacturers of this broad Dominion, joined together, primarily, of course, for the purpose of looking after the special interests of the manufacturers. Let me, however, say to our guests, that there is a broader, and a more patriotic spirit in our Association than mere personal ends, and I say it as one who, from long acquaintance with the innermost workings of this Association, knows whereof he speaks. And I say to you, that above all else, the guiding thought and the animating motive of this Association, the very mainspring of its activities, is the desire to aid in the advancement, in the development and in the upbuilding of our country—to help in placing Canada in the front rank of the nations of the world—a position to which she is entitled to aspire, by all the gifts of Providence so lavishly bestowed.

CANADA, HER EXTENT AND HER RESOURCES.

Think of Canada's immense area—comprising one-third of the British Empire. Leaving out of consideration our comparatively unknown Northern Territories of Franklin, Ungava, Northern Keewatin, Mackenzie, and the gold-yielding Yukon, which together have a greater area than Russia in Europe, we have lying between Ontario and the Rocky Mountains, in the Province of Manitoba, and the Territories of Assiniboia, Saskatchewan, Alberta, Athabasca, and Southern Keewatin, a habitable area of unsurpassed fertility situated within the same latitudes as the most populous countries of Europe, and almost equal in size to the Empire of India, which supports over two hundred million people. The Province of British Columbia is equal in area to Italy, Switzerland, and the Austrian Empire combined. Ontario is considerably larger than Germany, Holland and Denmark together. Quebec could take in Belgium, France and half of Spain, while if Newfoundland be added to our Maritime Provinces, they will have an area about the same as the British Isles.

Think of Canada's unrivalled resources, of almost everything, in its natural state, which is required for either the necessities or the luxuries of mankind—awaiting only the master hand to complete the transformation; her equally unrivalled waterways and water powers, which in their number, magnitude and magnificence, eclipse those of any other land; her blue sky and her bracing climate, producing a strong and vigorous race, those men of the North, unconquered and unconquerable. Consider also her Constitution and her Laws, guaranteeing liberty and fair treatment to all. Think earnestly of all these and tell me, if we have not within ourselves, all the elements necessary for the making of a mighty and a prosperous people.

CANADA'S FUTURE.

I know that your answer will be "Yea." You are optimists all, and thank God for it. The pessimist, like the free trader, is past and gone—gone and almost forgotten, and there remaineth none so poor as to do him reverence. Pessimism gentlemen, is an evil, blighting influence that cripples progress, delays action, and produces commercial cowards. Give it rein and it will breed cause for its own existence from the very stagnation which it produces. But Canada has come into her own, and answered is the call of the poet when he wrote:

"But thou, my Country, dream not thou!
Wake, and behold how might is done;
How on thy breast and o'er thy brow,
Bursts the uprising Sun!"

We are all optimists for the best reasons, because we have learned to know and to appreciate our land, and we are filled with enthusiasm for the possibilities within our reach, and determined to use every endeavor in our power to build up this Canada of ours into a great, a populous and a prosperous Nation, fit partner in a mighty Empire. It requires but little imagination to fill one with enthusiasm for such an outlook, and it is an inspiration to feel that to us is given an opportunity of sharing in this work.

A NON-POLITICAL ASSOCIATION.

I have said that this Association is non-political, and I mean it. Party politics has no place in our work. The question of a member's party affiliations are never considered. If you will pardon a personal allusion it will exemplify what I mean. I stand here to-night as President of this Association, yet I think I am safe in saying that not five per cent. of the members of our Association know what my party affiliations are, simply, because the question is never considered. As an Association, we know no politics, except the development of our country.

BENEFITS TO MEMBERS.

In various ways the Association is benefiting its members, Time does not permit of going into the many details. Let me merely mention some of the more important features, such for instance, as assisting in developing the Export Trade, through the appointment of Correspondent Members in many of the important trade centres throughout the world. These Correspondents are at the service of any of our members and will advise them regarding the possibilities of trade in their locality, and supply names of possible customers. This same department of our work will also secure Mercantile Reports on these firms from reliable sources at very moderate rates, furnish Translations of any correspondence and advise on the best shipping routes, thus furnishing, to beginners in the Export business, much valuable assistance and supplying them with information at a minimum of cost, which they of themselves, through their inexperience would either not have been able to secure at all, or would have obtained only at much expense.

The Association has also established a Transportation Department, under the charge of an experienced transportation expert, so that any member having a grievance against any of the Transportation Companies, can have his case handled for him by one who can present it clearly, logically, and fairly, before the Railway Commission. This Department has already achieved results very beneficial to many of our members.

The Association can also, I think, fairly lay claim to having advanced greatly the quality of Canadian manufactured products. The spirit of the organization is that nothing is too good for Canada, and the inspiration among our members is, to have "the goods which are made in Canada" the equal of those produced by any country on earth, and in many lines of skilled manufacture, Canada already takes no second place.

THE ASSOCIATION AND THE TARIFF.

As to the tariff, we are believers in the absolute necessity of a protective tariff for the development and prosperity of Canada. For the benefit of ourselves as a class, "No." For the advancement of our country, as a whole, "Yes," emphatically "Yes." Do the people want industries in Canada? Again: "Yes." There are a thousand reasons for—none against. But well you know and well I know that industries in Canada could not exist, in the comparatively small development, nor would others be established, in the face of the fierce competition from either the cheap labor of Europe, or from the tremendously developed, highly specialized and thoroughly established industries of the United States. A protective tariff must be furnished which will at least offset the disadvantages under which our home producers labor, if Canadian industries are to be established.

I was glad to hear the Hon. the Minister of Finance declare in his speech at the banquet, which was tendered to him in the City of Toronto, that "there was no use in discussing free trade. It was only an academic theory," and he was right. Gentlemen, it is "a condition and not a theory that confronts us." Free trade there is not, and a tariff for revenue only (if not sufficiently high to be protective) would simply increase the cost to the consumer, by the percentage of the duty; without in any way building up or developing our own land; keeping neither the men nor the money at home. A policy of a tariff for revenue only in a richly endowed but undeveloped country is sheer folly. There remains nothing but a protective tariff, and that is what we must have for Canada, if we wish to achieve our destiny.

IMMIGRATION FOLLOWS PROTECTION.

I have heard it disproved. I have heard theory and prediction trying to controvert demonstrated facts. Let me give you just two examples which will typify what I have in mind. The first is the statement which we frequently hear made, that "protection retards immigration." Not to come any nearer home, for an example of this statement, I remember some years ago reading a letter from a noble English Lord, addressed to a patriotic and progressive Canadian, who has honoured us with his presence this evening, and in this letter His Lordship pointed out that which we all know, viz., that Canada's greatest necessity was population, and he bewailed the fact that in our blindness we failed to realize the mistake which we were making in maintaining a tariff. "If we would only throw down our tariff walls, and show to the world that Canada was a cheap country, then would population as a mighty stream flow towards our gates."

Gentlemen, that is a "nice" theory, but in the face of the demonstration of the absolute falsity of it, at our very doors, what do you think of the fatuous blindness of men in public life who will hold it? Here are two countries side by side, divided by an imaginary and invisible line, alike in every essential natural resource and in potential greatness, one having no advantage over the other, as similar in these respects as are the two halves of this paper. One has an exceedingly high tariff, the other a moderate, or low tariff. Surely the one with the high tariff must have to a superlative degree all those features detrimental to immigration, which His Lordship saw in tariff walls. But, gentlemen, what are the facts of the case? To which country did the tide of immigration flow, in which land did the millions upon millions seek a new home? You all know the answer. In that land which was protecting and building up its industries, offering congenial and remunerative employment to its people and developing its home market. And as if that were not enough, to that same land went a million and a half of our own Canadian-born. Gentlemen, on the one hand you have His Lordship's theory, plausible on the face of it; on the other, the actual facts. By which will you be guided? For my part in this practical age I prefer to be guided by the latter.

MANUFACTORIES IN THE WEST.

The other example of theory vs. fact, to which I wish to draw your attention, is equally glaring in its falsity. I refer to our North-West. When our critics have exhausted every

other argument, they spring the patriotic plea upon us. "Surely," they say, "you realize that the great hope of Canada's future lies in our magnificent West," and when we acknowledge it, they add: "Surely you would do nothing to retard its development. There is a country, which can never become a manufacturing country, and must therefore be unalterably opposed to protection."

Gentlemen, once again I ask you to turn in the same direction for a demonstration of the falsity of that position, and what do you find? In the Western States, similar in many respects to our own North-West, but unequal in fertility, we find (from the last United States Census, that of 1900), that the annual product—remember annual product—of the manufacturing industries of the Western States was $5,252,311,029. The Canadian Census of 1901 shows that the product of Canadian factories, for the whole Dominion, was $481,053,375, or less than one-tenth of the output of the Western States alone. The annual output of Iowa's manufacturing establishments was 204 million and of Missouri's 385 million. In either instance, you have single Western States, rivaling in output of manufactures, that of the whole Dominion of Canada. And yet, in spite of all that, our theorists will still go on theorizing, and our false prophets prophesying apparently oblivious to facts as they exist.

Gentlemen, I pose neither as a prophet, nor the son of a prophet, but I will make a prediction myself, and it is this. That with adequate protection, many in this room will live to see our great North-West dotted over with busy industries, forming the nuclei of great manufacturing centres and furnishing a home and stable market for a large percentage of the products of our Western fields.

IMPERIAL PREFERENTIAL TRADE.

We have been criticized extensively on account of the stand which we have taken in regard to Imperial Preferential Trade, and we have been charged with insincerity because we have advocated Preferential Trade on the basis that the minimum tariff should be protective to Canadian industries. We will stand by that declaration, and we contend that it is no visionary proposition. Any other basis would be injurious to Canada and not only injurious to Canada, but for that very reason detrimental to the ultimate progress of the Empire. We believe that the greater and more prosperous Canada becomes, the better it is for the British Empire. Our critics base their conclusion on the false assumption that adequate protection to home industries prohibits all importation. Gentlemen, once again I ask you to look to our nearest neighbor for a convincing proof that such is not the case. In spite of their extremely high tariff, they are still importing hundreds of millions of dollars' worth of goods. And so it would be with Canada, and as our country grows in population and in wealth, so would this commerce increase and we wish to turn it as far as possible into British channels.

We contend that it is feasible. Let me give you an example of effective preference. From the Customs returns for the fiscal year ending June 30th, 1904, we find that the imports of sugar from Germany amounted to about $500,000, and from the British West Indies between $5,000,000 and $6,000,000. This is a complete reversal of the condition of affairs existing prior to the imposition of the German Surtax. Do you appreciate the effect which the increased tariff had on the German sugar, without it being necessary to decrease the tariff on the West Indian product? I need not ask you if the result is satisfactory to that portion of the British Empire.

We have the honor of having with us to-night Sir Howard Vincent, a true friend of Canada, whose great influence in the British House of Commons has always been at the service of the Colonies, a man whose name will go down in history as one of the very earliest advocates of Imperial Preferential Trade, a co-worker with the Right Hon. Joseph Chamberlain, and I am going to ask him to take back a message to Mr. Chamberlain, and it is that we are heart and soul with them in their endeavor to evolve some plan of binding the Empire permanently together in the bonds of union. I believe that Mr. Chamberlain is right when he says: "There is a universal desire for closer union." "It is essential to the existence of the Empire. *It can be most hopefully approached from the commercial side.*"

SENTIMENT FOLLOWS TRADE.

Gentlemen, there is a saying which has been doing much service of late, namely: "Trade follows the Flag." I am afraid, Sir Howard, that in some instances it has been German Trade and Yankee Trade and French Trade, which have followed the Union Jack. Let me give you another, and I believe more practical thought, and that is, that "Sentiment follows Trade," more particularly trade of a satisfactory nature. Gentlemen, neither you nor I need any incentive to our loyalty to the British Empire. We have never known any other allegiance, and we never will. But as our country fills up, attracting, as we hope it will, millions of people from foreign lands, we will find a large portion of our population which knows no sentimental tie for British connection. We are then met with the necessity of generating that sentiment, in order to strengthen the tie that binds us to the Mother Land. And I believe that the simplest, most practical and most effectual way of propagating it will be through the satisfactory trade relations which may be established by means of preferential tariffs between the different portions of the Empire.

Gentlemen, we are proud of the traditions of the British Empire. But let me ask you, what nobler ambition or prouder inspiration, could we have, than the thought that to us may be permitted the opportunity of building tradition for the generations yet to come, by helping to place on an enduring basis the Empire to which we belong.

> "And we of the newer and vaster West,
> Where the great war banners are furled,
> And the cannons are silent along our coasts,
> Saxon and Gaul, Canadians claim
> A part in the glory and pride and aim
> Of the Empire which guides the world."

Gentlemen, I now have the very greatest of pleasure in calling on the Right Hon. Sir Wilfrid Laurier to propose the toast of Canada and the Empire.

The audience with one accord rose to their feet and greeted Sir Wilfrid with round after round of the heartiest applause, followed by the singing of "For He's a Jolly Good Fellow."

SIR WILFRID LAURIER

Sir Wilfrid Laurier: Mr. Chairman and Gentlemen,—It is ever a pleasure to sit at this board, this hospitable board of the Canadian Manufacturers' Association. The cheer is good, the company is excellent, and at this time on this evening it is exceptionally excellent. We have with us, as has been stated already by our Chairman, some guests whose presence adds to the interest of the occasion. We have with us Sir Howard Vincent, who comes from the very heart of the Empire, who has given a great deal of thought to the relations which ought to exist between the Mother Land and the colonies, and whose views we are all impatient to hear, and which we shall listen to with the greatest possible

interest. I do not know that we shall share all his views. Sir Howard Vincent comes from a free country, and comes into, if I may say it, a freer country, and we are accustomed here to liberty of speech; but whether we agree or disagree, and in a large measure I am sure we shall agree, all will welcome his words.

We have also the Hon. Mr. McCarthy from Trinidad, who brings to us the expression of sympathy from the West Indies. We have also my friend, Mr. George E. Foster—(Applause)—whose presence at this board I have not seen for some time, but whose presence will all the more be welcome, as he has already had evidence of. I could proceed with this list, but I shall stop here. There are other eminent guests whose faces, whose presence, I would like to call to your attention, but I will confine myself to these three names, because these names shall be coupled with the toast which it is my privilege to present to you, and as has been announced by the Chairman the toast is "Canada and the Empire."

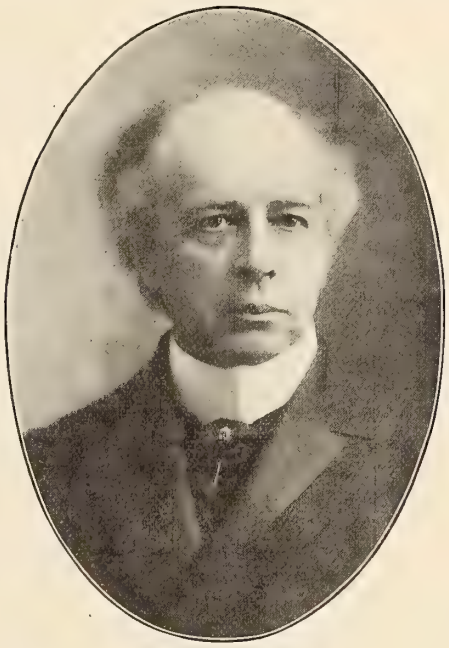
CANADA AND THE EMPIRE.

Canada and the Empire is a very large subject, especially at half-past eleven. It would be difficult to do justice to it in more time than I have at my disposal, but the development of the British Empire justified the one who has said, and I think it was Oliver Cromwell, that he goes farthest who does not calculate in advance where he is going. The history of the British Empire as it exists to-day is a creation of modern growth. It does not extend beyond the end of the eighteenth century, and it is a remarkable fact that the history of the British Empire as it exists to-day, as we are proud of it, dates from the day when the fortune of England was at its lowest ebb, from the day of the conclusion of the American war for independence of the colonies. When the war for independence of the colonies was concluded, when the treaty of peace was signed in 1783, apart from Newfoundland, which at that time was merely a fishing station, apart from a few islands in the West Indies, the colonial possessions of Great Britain were confined simply to this colony here on the banks of the St. Lawrence, which had been peopled by people not of English origin, which had been settled by a country which had been England's chief rival in modern history, which had been brought under the domination of England only some twenty years before, but the people of which remained true to British allegiance when British allegiance was assailed by her own kith and kin on this continent. (Applause.)

From that day, however, of England's direst distress, from that day commenced England's brightest fortune; since that day, and in the short space of less than one hundred years England acquired, either by conquest, by discovery or by colonization—more by discovery and colonization than by conquest—India, Australia, New Zealand, South Africa, Mauritius, Ceylon, Malta, Jamaica, and scores and scores of islands in all seasons and in all climes which dot the whole globe with the colors of Great Britain. (Applause.) How vain are the calculations of men! How mysterious are the ways of Providence! Who could have supposed, when England's colonial empire had been rent by the American war, that in less than one hundred years England would have become the greatest colonizing power that the world has ever seen? Who could have supposed at that moment that in less than one hundred years England would build up an Empire greater than ever had been the Empire of Rome in its palmiest days? (Applause.) Yet, sir, the impossible, the dream which it would seem impossible to dream, has become the mighty reality of which we are the living witnesses. To-day England has an Empire which is second to none in the modern world, and that has been equalled but once in the whole course of history.

IMPERIAL FEDERATION.

Now, the question has been asked, and will be asked to-day—it is asked many and many a time by both friend and foe: by friend with some anxiety, by foe with some bit of jealousy—How will this mighty fabric be maintained, how can it be kept together? How can so many conflicting elements be kept close together under the sway of the Empire of Britain? Sir, this is a question no longer to be asked; this is a question which has been answered long ago—some sixty years ago, when the principle was introduced of local autonomy and legislative independence in all constituent parts of the British Empire. (Hear, hear.) The Empire of Rome fell under the weight of its own concentration, but the Empire of England exists by freedom, by local autonomy, by legislative independence; and the Empire of England, be it said, is a galaxy of living nations.



SIR WILFRID LAURIER
Premier of Canada

In the words of John Bright in this connection, Rome is the lone mother of a dead empire; England, the living mother of young nations. (Applause.)

THE TARIFF PROBLEM.

But, sir, this answer, though given, is not, perhaps, wholly satisfactory. Men will still enquire after all if that is the end—if we have reached the limit. I say no. But, sir, what is to be the new feature, if there is one to be? I do not propose to give any solution to-night. There is a thought in the minds of many that the bond of union would be found in a uniformity of tariff for the whole British Empire. Well, for my part I cannot see that a uniform tariff is the solution. The conditions of civilization, the conditions of climate, the conditions of production make it impossible that you can have for Canada the same tariff as for India, the same tariff for India as for Australia, the same tariff for Australia as for South Africa; but it is possible, I believe, that we can have between the Mother Land and the colonies treaties of commerce, if I may so speak, whereby we can sit down and by mutual concession, by

giving and granting on one side and the other, develop the trade of Britain and her colonies to the mutual advantage of all. (Applause.)

I am well aware that the task is not without difficulty. We have some views in Canada; they have their views in Great Britain. My friend, the Chairman, will permit me to say, as I have said, that this is a freer country than Great Britain; that, perhaps, I would not endorse every word and every syllable of what he has said, though I would approve a great deal of it. The same thing may be said of our policy in Great Britain and Canada. We cannot have the same tariff in Canada as in Great Britain, but I will not say what they should have in Great Britain. It is their own look-out; it is for them to determine themselves. But when they have chosen their policy and when we have chosen our policy it shall always be possible to sit down together and come to the conclusion whether, by giving and granting, we can still further extend the relations which already exist between us.

Gentlemen, these are the views I would give you if it were not a few minutes of twelve, but I have said enough on this occasion. (Voices: No, no.) I do not want, sir, as there are three other men to speak to this toast to deprive you of what they have to say, and so let us rise to the toast which I have given you, "Canada and the British Empire," coupled with the names of Sir Howard Vincent, Mr. McCarthy and Mr. Foster.

After a stirring vocal selection by Mr. Ellsworth Duquette, the President called on Sir Howard Vincent, who was received with great applause.

SIR HOWARD VINCENT

Sir Howard Vincent: In the enthusiastic response of the company here assembled was given the true answer to the eloquent speech of the Premier of Canada, my Right Honorable friend, Sir Wilfrid Laurier. (Hear, hear.) But, gentlemen, you must assuredly agree that either you, Mr. President, or the committee charged with the arrangement of this banquet, or the indefatigable Secretary of the Canadian Manufacturers' Association, or the editor of that excellent journal, "Industrial Canada," deserves the issue at the hands of Sir Lloyd Wise, the greatest authority on Patent Law, the issue of letters patent this evening for the royal sign manual they have devised and the truly novel and original scheme for response to the toast of "Canada and the Empire."

They have deputed me, a dweller in the Mother Country, to respond, and they have deputed the Hon. Mr. McCarthy, of Trinidad, to respond, and they have deputed my honorable friend, Mr. Foster, to respond; and by these names, Mr. President, you have shown in the clearest and most unmistakable manner the unity of the British Empire. (Hear, hear.) You have shown that to every true and loyal son of Britain the interests and the development of Canada are as precious as to every Canadian, and you have shown that the prosperity of Britain and of the British Empire are dear to the hearts of every loyal son of Canada.

THE RESOLUTION FAVORING PREFERENCE.

I rejoice, therefore, Mr. President, that, although the Canadian Manufacturers' Association may advocate measures for the advancement of Canadian industry, for the extension of the fields of Canadian labor, for the safeguarding of Canadian markets from the ravages of the foreigner, you are, one and all, from your address, from the learned address of my generous and hospitable friend, the retiring President, Mr. George Drummond, and by the motions passed at Halifax two years ago, of the opinion that whatever Canadian legislation may be necessary in this direction, a substantial preference should be given to the goods of Britain and to the products of the British Empire. (Hear, hear.) You have affirmed this again and again, and even this morning in solemn conference you passed unanimously an emphatic resolution upon this question, which I hold in my hand. That resolution, Mr. President, has, I trust, long ere this been cabled under the oceans to the Old Country and to all parts of the Empire. It has, I trust, been already read by that ardent Imperialist, who thought fit the other day at Lincoln to flout and jeer and mock at those who were doing their utmost to develop the trade of the Empire on mutually advantageous terms, and to develop the trade of all parts of the Empire. We have, it is true, our own differences, but these are matters which ought to be, and should be, above party, matters for all Britain, and in which all Britain should have common interest.

A MESSAGE TO MR. CHAMBERLAIN.

You, Mr. President, have given me this evening a message to the leader in this work, the Right Honorable Joseph Chamberlain. (Hear, hear, and applause.) I pledge you



SIR HOWARD VINCENT

my word that message shall be given. I pledge you my word that message shall be given to those members of the House of Commons of the Mother Country, from one-third to one-half the whole house, who are working with him in that direction. I pledge you my word that that message and your resolution shall be given to the masses of the people who are dependent largely upon this development of trade within the Empire for the source of livelihood for their increasing millions. You have told me, Mr. President I know not if it was secret—that you are contemplating a visit to Britain next year. I can assure you that the Canadian Manufacturers' Association will be received with open arms. You will be able to tell the people in the Old Country of that scene depicted upon yonder ceiling, the great wheat fields of the North-West; and I do not doubt and I do not wonder that they give inspiration to my honorable friends sitting below there at the table underneath that picture:

"The wheat that is grown in Canada
Is the pride of a boundless land;
The boys that are grown in Canada
Are the boys to whom Britain holds out her hand."
(Applause.)

COMMERCIAL TREATIES DENOUNCED.

Sir Wilfrid Laurier, it is six years and more since I had the great honor of meeting you. The last occasion was, if you remember, at Buckingham Palace, the garden party given for the late Queen Victoria of revered and illustrious memory at the conclusion of the festivities marking her diamond jubilee and at the conclusion of the ceremonies of the great Imperial Conference, at which you, Sir Wilfrid, and your colleague so worthily represented the interests of Canada. (Applause.) I took the liberty of asking you how fared it in the conference with the treaties which stood in the way of any approach being made to a closer trade relation between the Mother Country and the colonies, treaties the denunciation of which have been asked for by all your predecessors, the Right Hon. Sir John Macdonald, the first Vice-President of our U. E. D. League, by Mr. Abbott, by Sir John Thompson, and last but not least by that veteran and loyal soldier in the cause of preferential trade and commercial development within the Empire, the Hon. Sir Charles Tupper. As Mr. Chamberlain approached he said to me "Be of good cheer"; and within a few hours the official announcement was made in the Imperial Parliament that those treaties had been denounced, that a cable had been despatched by Lord Salisbury to Berlin, to Brussels and to the other powers concerned giving a year's notice of the denunciation of those treaties. The British people took it quietly. The British people were glad, although some professors of political economy had been condemning to eternal fire the efforts made towards the repeal of these treaties.

CANADA'S PREFERENCE APPRECIATED.

And so will it be, I venture to think, when closer trade relations are cemented between all parts of the Empire. You, Sir Wilfrid Laurier and your Government, the very moment your hands were free, gave a generous concession to British trade within the Dominion of Canada. I regret my honorable friend the Minister of Finance, the Hon. Mr. Fielding, is not present this evening. I hope, as the Spaniards say, he may live for a thousand years. No better monument could be raised or no better epitaph could ever be written of the present Minister of Finance than the memorable words he pronounced in the House of Commons at Ottawa in July, 1898: "From to-morrow morning British goods will pass the Custom House of Canada on more favorable terms than foreign goods." (Applause.) You gave a preference then of one-fourth. It was increased two years later to one-third. You made no huxtering bargain with the British people; you presented no pistol at their head, but of your own free will, supported by all parties and by all classes of people within the Dominion, you gave this preference to British trade. It was a generous act, and after this I do not think it is possible for anyone to say that Canada has made no offer. You are a man, Sir Wilfrid, of silver speech, but you have given deeds, not words, and performed acts, not made offers. (Applause.) And from my own knowledge, and I speak, I believe, with the authority of the whole of my constituents, I can truly say that the great masses of the people at home are deeply grateful to the people of Canada, and will spare no effort, be the obstacles what they may, to overcome the difficulties which beset their path.

At this hour of the evening, and considering the number of speeches which are to follow, it would ill become me if I were longer to trespass upon the patience of this great audience. I thank you from the bottom of my heart for the welcome you have given to an humble representative for many years past in this cause. I think that the result up to the present even has not been unsatisfactory to Canada. Without troubling you with details of figures, we see that your sales to Britain are double your purchases from Britain, and that your sales to Britain in the last fiscal year are double what they were before the inauguration of this policy in 1896. That is, there were last year $125,000,000 against $62,000,000 in 1896.

Nor have they been unsatisfactory to Britain. British sales to Canada, thanks to your policy, have also doubled within that period. And does any man want further evidence of the success of this policy? It is found in a letter which I saw but yesterday night from the president of a great agricultural implement factory close to the southern borders. His words were these: "Canadian tariff is knocking us hard in the West, and Canada is more prosperous and growing faster in proportion than all the rest of the world put together."

May that state of affairs long continue, and a wise administration and a loyalty to the Empire and adhesion to the flag and to the Union Jack, and under its provisions may that Empire which you, Sir Wilfrid Laurier, have depicted this evening in such eloquent and glowing terms ever grow stronger and stronger with all its continents and its islands and its territories, with its 400,000,000 of men guarding the gates of the ocean, may it be the pillar of peace, the pioneer of progress and the pinnacle of prosperity, of piety and of plenty. (Applause.)

HON. R. H. McCARTHY

The President: I have now very great pleasure in calling upon the Honorable R. H. McCarthy, of Trinidad. (Applause).

Hon. R. H. McCarthy: Sir, I am deeply sensible of the honor conferred upon me by being asked to address such a gathering of the captains of industry of this great Dominion, a gathering comprising persons collected from the whole of the vast area between Cape Breton and Vancouver. The honor is the more marked in that I am associated with a toast of such importance, and that I am, by being associated with that toast also associated with the Prime Minister of Canada, and with Sir Howard Vincent, whose name is a household word throughout the Empire as a consistent and able and zealous opponent of the dumping of foreign rubbish on British shores, (Applause), whether that rubbish take the shape of bounty-fed goods or prison-made goods or destitute aliens.

TRADE WITH THE WEST INDIES.

The honor, sir, which has been done to me is mainly due I conceive to the fact that I am the only representative of the West Indies present here to-night; also in some degree to the fact that as custodian of the gates of one of the West Indian Colonies, watching the tide of traffic pass in and out, I have bestowed more than a cursory interest upon that portion which connects us with our great northern sister towards whom every true Briton whatever his calling, wherever his lot be cast, must look with the eyes of admiration and affection. Sir, that traffic is, as antiquity goes in

the new world, fairly antiquated. Before Montreal became British, before Halifax was founded, while Pontiac still camped on the ground where your Federal Capital now stands, ships of your Maritime Provinces were familiar friends in every port in the West Indies. There is, by the way, a curious or interesting thing that I came across in my researches respecting that traffic. In a comparatively late year, the only one that I could get the figures for, the year 1787, that is one hundred and twenty years ago, among other tropical products that you imported here was 787,300 gallons of rum. Now gentlemen, the population of British North America at that time was probably under 400,000. I therefore come to what I trust you will consider a reasonable conclusion, that most of your highballs were then made of British West India rum, (Laughter), and they were fairly numerous.

Reference to the age of the traffic between the West Indies and Canada reminds me of a story which in my own country would be called a chestnut and which, though it



HON. R. H. McCARTHY
Comptroller of Customs, Trinidad

may not have been able to survive the transatlantic passage, at all events has the merit of being appropriate. An Irish peasant having performed some job for the Squire of the parish was asked to have some refreshment. He assented, and while the Squire poured it out he dilated upon its great age and told Pat that it had been at least twenty years in his own custody. Pat listening admiringly to everything the Squire said, remarked when he had finished, "Bedad, your honor, but it's very small for its age." (Laughter).

Sir, the traffic between Canada and the West Indies is very small for its age. It amounted last year to two and a half million dollars in each direction. Now, this is not the time nor place to discuss why it is so small and why it is not larger, but there is one thing that I may remark, that is, your prodigious manufacturing enterprises are certain to increase your surplus for export, the surplus that you do not know what to do with and that you want to dump somewhere. The search for new markets will become a subject of much more importance than it is at present, and therefore the West Indies are worth looking after.

THE EVE OF REVIVAL.

Now, my dwelling on the past is a customary and pardonable weakness of those who have seen better days. The West Indies have known better days. They have had their vicissitudes, they have had staggering blows, so frequent and so severe as to suggest the idea of being malignant.

There have been the abolition of slavery, the abolition of preference with Great Britain, the operation of bounties on the Continent of Europe; and gentlemen if they have survived these, as they have, it is striking evidence of their vitality, of the extent of their resources, of the pluck and the endurance of the Britons who have kept them going. (Hear, hear). And further the growth in the Empire of such countries as Canada, Cape Colony, and Australia has watted and thrown into the shade the smaller and the older colonies, and the West Indies are no longer, as they were one hundred years ago, among the brightest gems of the British Empire, to be fought for with measureless blow, and with countless treasure. That one must admit. It is true that no longer fortunes are made in the West Indies upon which houses now noble in Great Britain were founded; it is true that no longer do heiresses from the West Indies help to rebuild their faded coronets. But sir, though there are those who will consider the history of the West Indies finished and write across their records, Ichabod, it is not true that their glory has departed. It is only dimmed, and in my opinion it is going to have a fresh lustre.

Even now they are not to be contemned from a trade point of view. The one and three-quarter millions of inhabitants in the West Indies now purchase $40,000,000 worth of products, which means $33 per head, a not insignificant sum; and the colony which I have the honor to belong to purchase $45 per head. I think if you study the statistics you will consider that that is very respectable, and I may add to that that the population of the West Indies only amounts to 14 per square mile, so that you will see the possibility of expansion to be very considerable.

More than that, the stars in their courses are on the side of the West Indies. What I may call the pivot of the world power is constantly shifting. For many centuries it was the Mediterranean, with the discovery of America it moved to the Atlantic; it is now moving, the process being hastened by the construction of the Panama Canal to the Pacific. The termination of one stage of that journey is bound to be the Caribbean; and sir, that sea circled by British possessions as by fortresses is bound, if historic precedent be of any use, to see a great drama enacted and to see commercial and possibly political developments which nobody now can measure, but which one may safely say are bound to be enormous.

DEPENDENCE ON UNITED STATES.

The desirability is unquestionable of a closer union between the two groups of colonies which are the standard bearers of Britain in the western world, Canada and the West Indies. Now, I am sorry to say that the dependence of the West Indies on the United States increases year by year. Year by year does the United States market become more absolutely essential to the West Indies. Nowhere within the Empire does the flame of loyalty burn more brightly than in the West Indies, but where the trade is there will the heart be also. If I were not a Briton I would be a citizen of the United States, but gentlemen, there is a long distance between, and I cannot contemplate with equanimity the possibility which I have suggested. It is conceivable, I say, I do not go further than that, that the

day might come when a turn of the fiscal screw would send the West Indies as suppliants to Washington for annexation.

Since I came to Montreal a few days ago, a friend made a striking and I think a true remark. He said the most remarkable feature of the nineteenth century was the development of the United States; the most remarkable feature of the twentieth century is likely to be the development of Canada. (Applause). I trust that that may be true, and it looks probable enough. If it be true, there is no more noble object for the young giantess of the Maple Leaf than to take steps to insure that her sister of the Palms shall not for her daily bread be forced to seek a foreign alliance.

RECIPROCITY WITH WEST INDIES.

The means of producing closer communication between Canada and the West Indies are fairly numerous. There is the ordinary commercial means which I may describe as commercial travelers, and more commercial travelers, and still more travelers; there is the means of better steam communication. Upon neither of these shall I dwell.

There is another means which cannot be ignored in any commercial gathering, since the subject has been advocated by one of the most gifted, one of the most imperially minded, one of the most strenuous statesmen whom Britain has known for the past century. I refer to the subject of reciprocal trade relations. Some of you here may remember that four and a half years ago proposals in that direction were made by Canada to Trinidad. Those proposals have I think formed a momentous heap. Nothing came of them at the time, but it would be rash to assume that the subject was finished. In point of fact, counter proposals of a somewhat similar nature from Trinidad, it is now a matter of public knowledge, are under consideration. (Applause).

Some of you—my friend Mr. Paterson certainly does remember it—will recollect that four and one-half years ago I was an advocate of free trade between Canada and Trinidad. I still think it is the right thing. I still think that something like it may come up, but I wish to utter a word of warning. There are many of you here whose ambitions go beyond a union between Canada and one small West Indian Island. They want a union with the whole of the West Indies, but gentlemen, the West Indies has six or seven governments, and covers many thousands of square miles, and their resources are very unequal. It is therefore in my opinion an absolute impossibility to bring about uniform and simultaneous relations with the West Indies. It is far wiser if you want anything of the kind to begin with one colony and trust to the others following.

I would like to make another remark which applies with regard to our mutual trade and to the great question of preference within the Empire. It is humiliating to Britain and to her daughters that we should find our trade to be more or less at the mercy of the vagaries of the foreign fiscal policy, and of the intrigues of foreigners. The question is a deep one. It is a question which touches the imagination by its magnitude. Its objects arouse patriotic enthusiasm; in many of its aspects it carries us far to regions beyond mere academics. But when all is said it must be settled on business lines and in accord with business considerations. If disappointment is to be avoided, if friendship is to result instead of enmity, if it be fraternal, not only in intention but in effect, I say that business considerations must guide the arrangements. Therefore gentlemen whoever captains such a movement as this, men like yourselves must be the pilots, men who know all the rocks and quicksands, and who are familiar with the channels by which the desired haven is to be reached. (Applause).

HON. GEO. E. FOSTER

The President: I am now going to call on the Honorable George E. Foster. (Applause).

Hon. George E. Foster: Mr. President, I will try to let all the western people get away by one, but if Premier Ross expects to get in a speech after mine and before one and get on that train he will have to sit on that splendid peak of isolation he is on now.

There are three good reasons why I shall not keep you long. First, it is half-past twelve in the morning, second, I am unaccustomed to public speaking, and thirdly, I am kind hearted. I neither want to impose upon this good natured audience any longer, neither do I wish to cut to the quick those young and aspiring politicians who have made their speeches and had them all ready to be distributed to this audience. It would be cruel for me, a much more experienced man.

But I am glad I am here to-night as the guest of the Manufacturers' Association. I am glad to be in the presence of those who have been called the captains of industry in other countries, and if that name is pertinent to men engaged in those great industrial operations in other countries, it is equally applicable to these sterling, enterprising, hard-headed men of Canada, who within the last fifteen years have brought up the industrial life of this country, and have induced a wideness and variety and excellence of production which has not I believe had its parallel in any other country in any other similar length of time. (Applause).

I am glad to have been here to-night to have heard the Premier. It is a long time since I have heard him. I was disappointed. So were you. I was listening with both ears and if there were any senses to be added, with those as well, to hear what the right honorable gentleman would tell these captains of industry what he was going to do with the tariff. (Applause).

He never said a word. He is too wise for that. He did give expression, frank expression, and full expression to a sentiment that he has expressed before, but which I was very glad to hear him express again, and that is, that he is not opposed to a preferential treaty, that he is not opposed to the Colonies and the Empire sitting down, casting up the balance of advantages and treating each other better than they treat those that do not belong to the family. (Hear, hear). That is an answer that might be given to Lord Rosebery direct, if, as is reported by the cables, he has said before a British audience that Canada is not favorable to, and that the Premier of Canada is not favorable to, better trade relations with the Mother Country.

CANADA'S RESOURCES.

Sir, the theme of the Colonies and the Empire is one which takes hold of the heart and the mind and the imagination of you men here, and of men such as Canadians are. I wish I had time, and you had the time, to say and to hear some two or three points in addition to what these gentlemen who have so well spoken have so well said. I would like to call the attention of Canadians to just two points of thought. You have thought of them before; you are thinking of them perhaps every day, but you cannot think too constantly of them. One is, where is Canada to-day?

Where are the Canadians to-day? And the other one is, What do Canadians propose to do in the future?

Where are we in Canada to-day? Do we make as much as we should of our geographical position, of our magnificent resources? No, not of the latter, because even the best of us, even those of us who have looked most deeply into them are far short of adequately measuring the wonderful resources of this country. (Applause). Every day of my life and every year of my life as I know more of Canada my imagination refuses to be checked, and as I look out to the future I say there are no practical bounds for Canadians and Canada's growth. We do not live in the present hour. The future is ours as well as the past to a certain extent. No man rightly gauges his position as a citizen of this country, rightly gauges the possibilities of this country lest throwing his vision back and seeing the great and satisfactory progress we have made in fifty years, he throws his vision forward and tries to picture, how weakly and how inadequately, what this Canada of ours will be one hundred years from to-day. (Hear, hear).

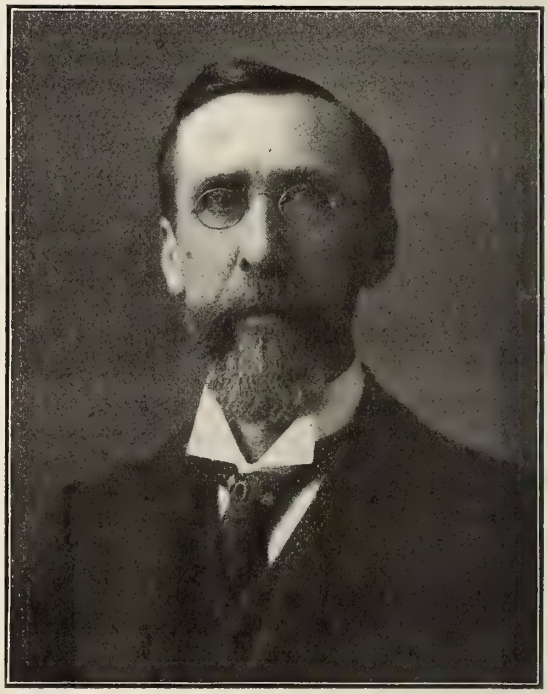
Where are we? In a land of rich and practically unbounded resources. Look at our coast lines, thousands upon thousands of miles where the rich food-preparing and fruit distributing seas seek our bays and harbors in peaceful and secure conjunction! Look at our inland waters, what great lakes and mighty rivers! What country has better and larger, full of food fishes, ready to moisten and give sustenance to the earth, and to transport the goods and the possessions of our people! Look at our mines and minerals, the smallest veins of which have not yet been traced, from the United States border to the rich gold bearing country of the Yukon! Who can tell what lies there of resources that nature has treasured up in centuries past, to be uncovered and revealed for the wealth and progress and beauty and comfort of millions that shall inhabit this country? Talk of our forests! Yes, but leave them all and talk for a moment and think for a moment of our uncounted acres of fertile land. What surprises you as you pass through the North-West? You see a million acres of rich wheat bearing land. It is wonderful. But the most wonderful thing of all is that there are millions upon millions, up to hundreds of millions, of acres of land just as fertile as that million now in fruit. (Applause). What will happen when those hundreds of millions of acres of land shall have been brought to the plow, brought to the reaper, brought to the garnering place, brought to the marts of distribution where food requirements are met by food resources? That is what I want to think of, of Canada in her mighty resources.

THE HIGHWAY OF WORLD COMMERCE.

One thought more, where are we geographically? On the mightiest highway the world has ever seen. Mighty now, mightier in the future. Here we lie on three thousand miles of extended territory in the northern half of this continent with sea lines the shortest to Europe, that mass and centre of energy and activity; and lying, too, with the shortest line of sailing to that vast old East slumbering in her might for centuries, and now waking, and when she is fully awakened contesting the palm of all the future ages with the mighty activities of Europe as they are to-day. (Applause). What are we? Three thousand miles of British soil with British harbors on each ocean, with mighty resources every mile between those harbors, the connecting link between the dominant power in Europe to-day and the dominant power in Asia to-day. (Applause).

My friend, the Premier, with a few eloquent words graphically painted to you the history of the past. Oh, how short, and yet we think of Britain and her civilization as a thousand years of age. Let me take a more modern instance. Nine years ago it was freely stated that Britain's prestige was on the wane, that the old Empire was beaten, that she was a decadent civilization; the Boer reckoned her as such in South Africa, hostile countries rimmed the horizon with eager eyes watching for the fatal blunder, for the show of vital weakness. Would the colonies stand by the Mother Country? There was a period of stress and strain. To-day where are we? I say without fearing a word of contradiction that the prestige of Britain in Europe was never higher or stronger than it is to-day. (Applause). I say that her army and her navy were never so fit as they are to-day. I say that in pursuance of that splendid stroke of foreign policy when Salisbury held out the hand to the cunning Jap and made a powerful ally in Asia, Britain's power was greater than ever.

Here we are a British country lying on this mighty highway between the oceans, between the two great centres



HON. GEO. E. FOSTER

of growing activity our geographical position is an inestimably important one. We here in Canada have our geographical position of importance.

A BLENDED RACE.

What are we? A united people. Scotch blood, Irish blood, English blood, French blood, flow through the veins of our people, and the strain of the German and of other countries of Northern Europe, but all blend together and make us Canadians, all Canadians. (Hear, hear). The best in all blended together, and who dare say that the blend itself may not make the best people of all? Here we are, a united people. You heard the songs of that grand voice opposite to us, Mr. Chairman, what were the tunes and what thrilled us? Was there any dissonance between the tunes? Oh, how beautifully they blended; just as they did in those days long past, of which let no Englishman ever forget the memory, when French armies and French loyalty stood for this weaker portion of British rule on this continent, loyally stood for it. (Applause). Let men rant,

let demagogues howl, let interested ones work out their mischiefs as they please, but Frenchmen and Englishmen, Scotchmen and Irishmen, we are Canadians all, and Canadians we will ever be. (Applause).

UNITY OF THE EMPIRE.

May I speak for a moment longer. I put out this thought to you as reasonable. Drop your prejudice, every one of you, come down to the business standpoint. Do we get any advantage in this country from British connection? (Voices: Yes, yes). Have we ever had any advantage from it? Is it not possible for us to reap the strongest advantage from it in the future? Say if, in 1899, South Africa had been stripped from Britain, would Britain's prestige have been what it is to-day? (Voices: No, no). I say to Britain our Mother Country, Vaunt your power, boast your might, speak of your civilization, but cut off these colonies from you and you are a mighty body, yet but a body maimed and whose growth is over. (Hear, hear). What are the colonies? The extension of the Empire. Cauterize the veins and separate the arteries between the two, and you induce paralysis in the old and delay progression in the younger. Let the blood flow from the heart to the extremities, the genius, the concentrated wealth, the concentrated skill of the old, the wide opportunities, the boundless possibilities, the rich developments of the new, and what have you for the future? Whatever we wish to make of it.

There is a little war on to-day in the far east. I notice that the Japanese use, the Russians too, probably, what they call screens, and apparently an army behind it. There is movement, strategy, progress to the left, progress to the right. There stands always the screen. It looks to be the whole thing to the party opposite, but the mechanism, the power, the might, the killing forces are at work behind. Six millions of people in Canada to-day, four millions in Australia to-day, a few millions in South Africa to-day, there they are, and the outsider looks upon them as the whole thing. They are simply screens of the mighty forces which in Canada and Australia and South Africa are springing up in the soil, are working out in the mind, are developing in energy and power and wealth and population until, when these strategical movements are ended a hundred years hence, you will find in each one of these a mighty people, strong, full, bound together in common interest and common love, not an instrument for jingo, not an instrument to satisfy the lust of war, but God's own great peace giver and peace keeper, a united and peace loving people, so powerful that war drops from the sword at her command, and the blessings of perennial peace can be secured by her co-operation. (Applause).

HON. GEO. W. ROSS

The President: I am now going to call on the Hon. Mr. Ross to propose the toast of Canadian Industry and Commerce. (Applause).

Hon. Mr. Ross: Mr. President and Gentlemen, the pleasant task has been assigned to me of proposing the toast of Canadian Industry and Commerce. If I could only epitomise the admirable speeches that have been made during the three days' sittings of this Association, I would feel sure that I was presenting the toast which has been entrusted to me in the most acceptable terms.

The canons of Canadian Industry and Commerce may be said to be four in number. First, that all Canadian industries should dwell together in unity. (Hear, hear). I remember the time when there seemed to be a strife between the industries of this country, rather of jealousy than of friendly rivalry, when those engaged in manufacturing pursuits were looked upon with an aversion, even with suspicion; when it was thought that they wanted to transfer to other shoulders those burdens of State which they should legitimately bear themselves. That time has passed, Mr. President, and now there is not that jealousy which was charged against these industries a few years ago. The commonwealth of Canadian Commerce is one and indivisible. The manufacturer and the agriculturist have a common interest in the development of Canada, and each as I understand it from your discussions, is equally ready with the other to discharge his full duties towards the State. There should be no jealousy between labor and capital, between factory and farm; and where there are so many latent resources awaiting development, certainly all jealousy should cease.

OUR NATURAL WEALTH.

As my honorable friend, Mr. Foster, has said, the natural resources of this country are almost unbounded. In the Province of Ontario we do not cultivate twenty per cent. of the arable land. We sustain a population of about two million. We could sustain a population of ten million. Japan, with no more arable land than we possess in Ontario, sustains a fighting population of 40,000,000. We might perhaps sustain an equal number did we pursue the same care in agriculture as is done in Japan. And what is true of Ontario is true of all the Provinces of the Dominion. We import more coal into Canada than we produce ourselves. We have the continuous beds of iron ore from Lake Superior to Cape Breton, and we import 100,000 tons of pig-iron and about 800,000 tons of iron ore. All these are indications that the natural resources of our own country await development, and it is the primary duty of this young nation to direct its whole energy towards the development of these natural resources and placing upon the markets of the world the natural resources of this country plus the addition which Canadian skill, Canadian taste, and Canadian enterprise could give to them.

SECURE THE HOME MARKET.

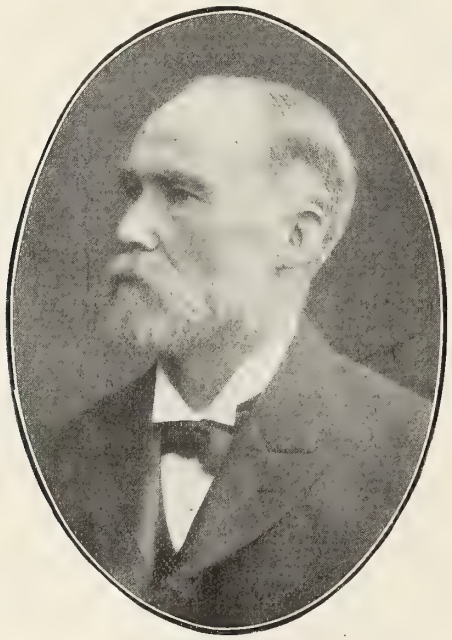
The second canon of our industries and commerce is that we should occupy our own market with the products of our own factories. That is to say we should substitute for the warehouse of the importer the factory of the industrial operator. (Applause). We import into Canada perhaps about one hundred to one hundred and fifty million dollars worth of goods. I don't know that the time will ever come when we can manufacture all we require or all we consume. There may be commodities that require particular skill or particular capital on certain conditions which might necessitate their importation, but why is it that we cannot in our own factories and from our own soil produce many of the articles that we import now in such large quantities? For instance we import about $40,000,000 worth of iron and steel and their manufactures, an immense quantity; we import about $8,000,000 worth of cotton goods. Why could not our busy spindles in our Canadian factories supply a considerable quantity of that? We import about as much in woollens, and $7,000,000 in machines and machinery. All these coming to us give employment to foreign workmen

on a foreign soil, instead of giving employment to Canadian workmen upon Canadian soil and in Canadian factories. (Applause).

I am delighted with the spirit of this Association which aims at extending and increasing the number of our factories and of our artisan classes, and to that extent increasing the population and the influence of the Dominion of Canada.

COMMERCIAL DEFENCE.

The third canon of our Canadian industries is that our Canadian industries have the inalienable right of defending themselves against any aggressor or invader. I believe we have the right to defend ourselves against commercial invasion in the same way as we would have the right to defend ourselves against a military invasion. (Hear, hear). When commercial war is proclaimed I believe we have the right to set up our breastworks and defend ourselves against the invader, no matter from where he comes, just as we would set up our breastworks against an armed invader. Now, commercial war is of various kinds. Dumping is



HON. GEO. W. ROSS
Premier of Ontario

commercial war in my opinion—war upon our industries, war upon our workingmen—and if we have a right to defend our homes against a foreign invader that would destroy these homes we have the same right to defend our workingmen and our capitalists against the illegitimate competition of foreigners, those who transfer our industries and our people to a foreign soil. (Applause). It is an inalienable right in my judgment that we should defend ourselves against any invasion of our industries that might imperil their future, and imperil those who are depending for their daily bread upon that commercial prosperity which the manufacturers of Canada have done so much to build up in the last few years.

FOREIGN TRADE.

Another canon of our industries is that we have the right, and that it is our duty to develop as far as possible the external and foreign trade of Canada. And in this connection I may be permitted to say a word about our trade relations with the United States. Now, I have no objection *per se* to a reciprocity treaty with the United States—*per se* I have no objection. We trade very largely with the United States now; we buy from them $150,000,000 worth of goods; that is about $30 per capita of our population, and they buy from us about sixty odd million dollars' worth, or about eighty cents per head of their population. If the people of the United States want to trade with us they are perfectly welcome to do so, but it would almost appear as if they did not want to trade with Canadians at all. For instance, they buy comparatively very little from us as I have already stated placed in opposition to what we buy from them. Last year we sold in the markets of the world $10,000,000 worth of cattle. The United States bought from us $120,000 worth. We sold $17,000,000 of grain; they bought $485,000 worth of it; we sold $24,500,000 worth of breadstuffs; they bought $853,000 worth; $46,500,000 worth of butter and cheese and eggs; they bought $77,000,000 worth; $5,000,000 worth of fruit; they bought $220,000 worth. These figures show that our neighbors are not very anxious to extend trade between Canada and the United States. And if you refer to the Dingley Bill or the McKinley Bill, you will see that they have erected almost an insuperable barrier between Canada and the United States.

RELATIONS WITH THE UNITED STATES.

Now, as I said a moment ago, I am not opposed to a reciprocity treaty *per se*, although treaties in commercial matters are in many respects objectionable. They create conditions of trade and beget influences which are sometimes entangling and irritating, and sometimes lead to international misunderstanding. That was our experience with the treaty of 1851 and the treaty of 1882. But what I hold is that between our custom houses and through them we can do all that can be done by treaty, and in that connection avoid the embarrassment which may come from a binding obligation. For instance when we wanted United States corn, we took the duty off; when we wanted United States binder twine or barb wire or anthracite coal we took the duty off. We got it without money and without price so far as the custom house office was concerned, and these articles came to us without a treaty. In the same way if the United States want our cattle or our breadstuffs, or anything we have to sell let them take the duties off and they will get these things at current market prices, and without the embarrassment of a treaty through the United States Congress or the Canadian Parliament. This is the way out of embarrassing obligations between Canada and the United States. It leaves both countries perfectly free, and so long as they refuse any offer of reciprocal trade with us, Canadians should stand as they do stand at the present moment, seeking other markets where they will be independent, where the market will be permanent, and where the market is almost unlimited for everything that this country can produce. (Applause). If, however, they would make us an offer (and the offer should come from them, not from us) then in the words of a distinguished Premier of my own province I would say that we might take that offer into our most serious consideration. (Applause).

THE BRITISH PREFERENCE.

Then I think we should extend our trade with Great Britain. We should make a supreme effort in that direction. It was only when we ceased to be playing to the market of the United States in the hope of a reciprocity treaty that our eyes were opened to the great opportunities across the Atlantic, and the all absorbing market which England was offering for everything this country could produce; and I

would deal with the English Government so far as trade is concerned, if there is to be any dealing at all of an official character, much as I would deal with the question of reciprocity. I am not so anxious to make a bargain with them as to what preference they should give us on condition that we should give them a certain preference. I do not think that is the proposition that is before either country at the present moment. If we, in the exercise of our patriotism and as a matter of advantage to ourselves think we might give England a preference of 33½ per cent. on the goods she sends to us, we will do so in a generous spirit and in no stinted measure. And if England on the other hand, in her kindness to her kith and kin beyond the sea, (who, though they have left her knee, have not ceased to love her), offer us any preference, we will accept it as the gift of her sovereign generosity and in the interest of the Empire to which we all belong. (Applause).

Do not let me be understood as in any sense opposing preferential trade. On the contrary I believe in it with all my heart, and yet I do not wish to place Canada in such relation, even with the Mother Country, that by any treaty or obligation we would sacrifice one iota of that principle of self-government so dear to us, or enter into any relation with her by a commercial treaty that would imperil the affection and good will and constant understanding which has so many years prevailed between Canada and the Empire. (Applause).

UNIFICATION OF THE EMPIRE.

We have made our offer and we will be met I believe in due time in the same generous spirit which we accorded towards the Mother Land. England is a land of conservative ideas. For fifty years they have labored under free trade, and it cannot be said that they have not prospered under free trade. They have looked so long at that side of the shield they may not think the shield has another side, and to my mind a still brighter side than the one on which they are looking at the present moment. And when that thought is realized, as I believe it will be within our time and before many years have passed, then I believe England will find out that there is a sentiment in trade. Just as when two men shake hands over a bargain that is mutually satisfactory, they are better friends from having made that bargain, even so if two nations, if England and her Colonies can shake hands over closer commercial relations, it will mark the beginning of a unification of the Empire greater and closer and stronger than we have ever seen before. (Applause).

England, as Mr. Foster has said, though aged, is not decrepid. She has her watch towers upon every continent. She sings the song of Tennyson's Brook, "Men may come and men may go, but I go on forever."

"Lay hold of the wings of the morning,
And flop round the world till you're dead,
But you can't get away from the tunes that they play,
To that blooming old rag over head." (Applause).

And it is because we want to blend in that martial song the joy bells of prosperous happy Canadians, and the joy bells of a thriving industry, and the joy bells of an expanding commerce on this continent that we say, in the loyalty and sincerity of our hearts, that it would be "A better day for England than she ever saw before" when she binds her colonies by the sentiment of trade as well as by the sentiment of that patriotism which follows her sons wherever they go. (Applause).

DISTRIBUTING FACILITIES.

Two practical suggestions that will take a moment and I have done. We have entered upon a new era. The construction of that great trans-continental railway now about being entered upon is a new era, shall I say, in the history of Canada; it means getting to our largest markets by the shortest route in the quickest time. I mean the British market, for the terminus of all our railway systems in Canada is Liverpool, not Halifax. We live beyond the ocean in the delivery of our produce. If that railway system and our expenditure upon transportation is to give us its full fruition we ought to take steps to see that the produce of our farms and orchards and dairies is protected, and that on its arrival at its proper destination it can be distributed with the least possible loss. (Applause). We send immense quantities of perishable and quasi perishable goods to the Old World. Five hundred thousand dollars expended in a cold storage plant at Liverpool would be the best investment Canada could make to-day. I speak advisedly from my knowledge of Ontario when I say so, and what will be good for Ontario, will be good for all Canada.

ADVERTISE THE COUNTRY.

Secondly, in order that our manufacturers might exhibit their goods and place before the British workman and the British capitalist the results and excellence of our native raw material, and also the result and excellence of what our Canadian artisans can produce, I would build in London a miniature Crystal Palace, half a million spent upon which would be a good investment. There they could see (and be proud of their sons when they looked upon it) what Canadian skill and industry and enterprise could do. And we need not be ashamed. You who have seen the exhibition at Toronto, presided over by my friend to my right (Mr. McNaught), need not be ashamed of what your Canadian factories can do. Let us get these goods on exhibition, let us get them before the British powers. Let it be known what we have in minerals, and in wheat, and in other raw material, and you have there a standing advertisement of Canadian skill and Canadian resources, and it will be an incentive to the men of England to send their sons to this land that they may share in the enterprise and assist in the development of this country.

Now, gentlemen, I give you, "Canadian Industries and Commerce" coupled with the names of Mr. F. D. Monk, the Hon. William Paterson, and the Hon. Mr. Prefontaine. (Applause)

MR. F. D. MONK

The President: I have much pleasure in calling upon Mr. F. D. Monk.

Mr. Monk: Mr. Chairman and Gentlemen, my friend, Mr. Foster, alluded to some younger politicians who had speeches ready, and whom he did not wish to preclude from giving those speeches to this very interesting gathering. I can assure you that the younger politicians who sit in the Opposition in the Province of Quebec age very rapidly, and that I have arrived at that time in my political career when I feel that it would be a most unwarrantable intrusion to speak at length in answer to this very important toast. It is however my duty to say to you that I deeply regret the absence of the leader of our party upon this occasion, and that that absence, as I know personally full well, is due entirely to engagements contracted by him long ago, for no man I am sure in this country has more at

heart the interests of your Association than he has himself. (Hear, hear). In fact I perceive from the manner in which you received his name that the fact is well known to you. The truth is that at the present moment he is, I might say, engaged in the business of manufacturing himself, and the tariff as it stands to-day is, as far as I see, not at all opposed to the successful carrying on of the business upon which he is engaged. And I might say that I think his output till this year will, I hope it will, be greater than it has been on previous occasions.

Gentlemen, I listened with great interest to what my friend, Mr. Ross, propounded as the fit canons of industry in this country, and to those canons as laid down by him I am sure that most of us in the House of Commons who sit to the left of the speaker, with some qualification perhaps as regards the reciprocal arrangement which he referred to with the United States, would be prepared to say Amen. I have not had the pleasure of meeting Mr. Ross before to-day, but I am told that he is to a certain extent left alone in the Province of Ontario; and if that be the case, and if Mr. Ross as a stranger wandered into the House of Commons I assume from what he has said this evening that he would instinctively stray over to the other side of the House, where, as he has propounded this evening, I have no doubt he would receive a right royal welcome.

THE ASSOCIATION'S USEFULNESS.

But gentlemen to return to this toast in a very few words. It is impossible for one who has lived in the public life of Canada for some years, and particularly who has seen the dawn of this great century we have entered upon, not to realize easily the immense usefulness of your institution. Let me say as one of those to whom has been revealed the great, the immense resources of our country, that not once from the time that I have entered Parliament and sat in the House of Commons have I failed to follow with the most careful scrutiny the deliberations of your most useful, and thanks be to Heaven, most influential Association. (Applause).

We have a great country and we know little of its resources. Less than three centuries ago Canada was considered merely as a fur-trading coast. It was not considered after the conquest of this country by Great Britain as a place with which successful bartering and exchange could be carried on, but since the date of the foundation of our great Confederation we have had revealed to us from time to time the immense, the boundless extent of our resources. And to-day few of those who are even still lingering at school are unaware of the fact that we possess here everything that is necessary to make of our Dominion a great industrial country.

RECIPROCITY WITH BRITAIN.

Gentlemen, much reference has been made to-night and some beautiful things have been said by every speaker as to our commercial relations with Great Britain. I confess that for those who have thought that possibly Great Britain, to which we are all so proud to belong, was on the verge of a downward grade, the great discussions which have taken place lately in England on the necessity of remodelling the relations between Great Britain and the outlying parts of the Empire must have been a convincing proof that that great Empire and that great flag which is behind you to-night, Mr. Chairman, are not upon the wane—very far from it—and that we are entering, if we can only all agree together, upon such development of the Empire as will be a revelation to the world at large. (Applause). It is a mistake to think that the questions raised by Mr. Chamberlain do not excite our interest in the highest degree, and let me say that I am not only happy but proud to see amongst us to-night one who, perhaps the first in England, raised the important question of the necessity of remodelling the relations between England and its great self-governing dependencies. I refer to Sir Howard Vincent, who has spoken to us so eloquently upon those relations to-night.

On the main question there is no doubt, it is necessary for us at the present moment not only to look carefully into the political relations which bind us to that great Empire, but also as Mr. Chamberlain has so appropriately expressed it in many of his public utterances in England, to look to the necessity of establishing freer commercial relations between the Mother Country and its colonies. (Applause).

DIFFICULTIES IN THE WAY.

At the same time it is perhaps possible as the Rt. Hon. the Prime Minister has said not to agree entirely as to the means. It is necessary for us, not only from a commercial standpoint but from every possible standpoint, to establish between England and this great colony possessing unbounded resources, more intimate, more favorable commercial relations. I prefer the designation of that great step which we are about to take as an attempt to establish favorable reciprocal relations between the Mother Country and ourselves than to speak in an unreserved way of purely preferential trade. (Applause). I agree it is necessary to have a public man speaking to men like yourselves, who upon a subject of that importance can give enlightenment, can afford explanations. I have myself found a great difficulty in realizing how it is possible for us to proceed upon the basis of preferential trade without possibly on some subjects creating difficulties. It is possible that that can be done, but as I stated a moment ago I preferred we should, together with the people of the Mother Country, sit down and endeavor to see whether we cannot benefit ourselves by having the immense and most profitable market which we can have in England, and on the other hand, in an unreserved way, in a subtantial way, as Mr. Chamberlain has put it, advantage the Mother Country herself in trading with us. It has occurred to me, I must say, that it is difficult to carry out in the way Mr. Chamberlain has pointed out it should be carried out, the giving of a substantial benefit to English manufacturers upon our own market, without to a certain extent injuring our own manufacturers who may be engaged in similar pursuits. As long, no doubt as the preference is confined to those things which we do not manufacture ourselves, we should and we can give a substantial and effective advantage to England, but it has occurred to me the moment there arises a conflict of interest between our own great manufacturers and the manufacturers of England, you create or you tend to create that spirit of bartering, that carping spirit which possibly might injure the close, the united relations which we would fain see existing in an unreserved manner between the Mother Country and ourselves.

CANADA FOR THE CANADIANS.

What we in public life desire, what we who wish to see better relations established within the Empire aspire to, is enlightenment and information, and from whom, gentlemen, can we expect that enlightenment if we cannot get it from yourselves? What we desire above all things is that we should develop to the utmost our own resources. What we view with alarm is that we should have a balance of trade against us, as we have this year, of $45,000,000, and even

$65,000,000 if you take into consideration that there are $20,000,000 of our exports consisting of gold and silver. What we desire is that we should have a balance of trade in our favor and not against us. (Applause). What we desire is that in our relations with that great industrial power to the south of us we should not have a balance of trade against us of $70,000,000, but that we should manufacture in our own country, with our own laboring men and with our own resources, those merchandises which we receive from the United States. What we desire is that we should if possible keep to ourselves that extensive manufacture. That we should, in one word, keep Canada for the Canadians.

We have, gentlemen, a great country, the extent and resources of which we scarcely realize at the present moment. You who belong, not to a class, (I do not like that word), but a set of men who have done more since Confederation to develop and extend the population of our country than any other set, you should receive the very best protection in the development of those great resources which are ours. What we wish for is that we should realize in this country what England undoubtedly in her great generous spirit intended these distant colonies should realize, that is to have their own fiscal policy, develop their own resources, enjoy to the fullest extent that great autonomous principle which has enabled England to develop the greatest empire of all times.

You are the men who can help us to carry out that manifest destiny which is ours, and therefore it is always with pleasure as a public man that I come to your meetings. I had the advantage yesterday of attending a most interesting sitting of your Association; and living in public life and having dearly at heart not only the aggrandisement and development of my own province, but of the entire country from the Cape to the Pacific Ocean, I will be on every occasion anxious to join you and to receive from you both individually and collectively that information and that instruction which I hold to be absolutely necessary for a public man if he is to fulfil in a patriotic way his duty as a member of the House of Commons. (Applause).

Hon William Paterson: Mr. President and Gentlemen, I understand there is another toast to be offered and that there will be associated with it the names of two distinguished gentlemen from England who are with you to-night as your guests. I am very anxious to hear them myself, and I am sure you will be pleased to hear them. I shall not stand between that pleasure to you longer than to thank you, Mr. President and your Association, for your kind invitation to be present to-night, which has enabled me to participate in the pleasure of this very successful meeting. I thank you very much for your invitation. (Applause).

The President: Gentlemen, the next toast on our list is that of "Our Guests," which will be proposed by Mr. C. C. Ballantyne, of Montreal, the First Vice-President of the Canadian Manufacturers' Association. (Applause).

Mr. Ballantyne: Mr. President and Gentlemen, in rising to propose the important toast of "Our Guests," I can assure you that I will be very brief indeed. We have been greatly privileged and honored this evening by having so many distinguished guests with us. Our hearts have beat with pride and our blood has coursed faster through our veins when listening to the most eloquent speeches that have been delivered by our brilliant leader, Sir Wilfrid Laurier, Sir Howard Vincent, and the many other distinguished gentlemen whom we have had the pleasure of listening to this evening.

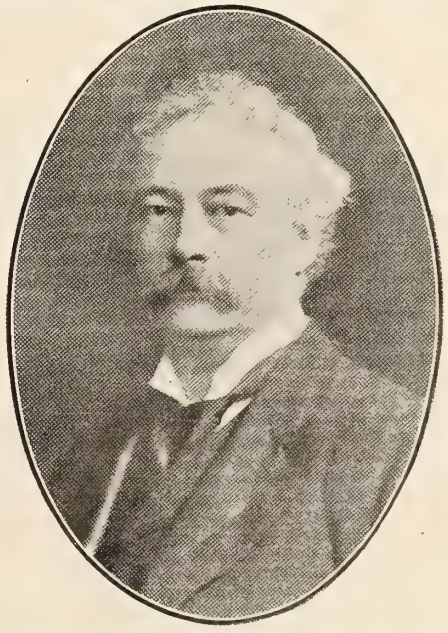
But, Mr. President and gentlemen, we still have quite a number of distinguished gentlemen to hear from. In proposing the toast of "Our Guests," I would like to couple with it first the name of Sir Lloyd Wise, who has prepared and compiled the paper on Patent Law which you have before you this evening. We are also greatly honored in having with us this evening Mr. F. H. Medhurst, from London, England, who I might say is a candidate for Islington in the coming elections, and one of Mr. Chamberlain's strongest supporters. We are also privileged by having with us the well-known and much respected Rev. Dr. Barclay, of Montreal. I therefore have much pleasure in giving you the toast of "Our Guests," coupled with the names of the gentlemen I have just mentioned. (Applause).

SIR LLOYD WISE

Sir Lloyd Wise: Mr. President, Right Hon. Sir, and Gentlemen, I come from an eminently respectable country, a country in which so far as I know there is only one institution at all comparable with this great institution, and that is our House of Commons. That I believe to be the only body in the Old Country which goes on talking into the early hours of the morning, and goes home with the milk.

At this late hour I can certainly not enter into anything of the nature of a detailed speech, even were I competent to do so with advantage. But I may say this, that just as you Canadians admittedly have not yet realized what you possess in this great Dominion, so have the people in the Old Country certainly failed to realize what a great place this is. Often have I heard it said that Canada is not a manufacturing country. It is my lot sometimes to address assemblages of people in the Old Country. I have come over here for the second time to learn, and I hope if I am spared it will be my privilege in my small way to endeavor to enlighten my country at home, as to what this vast Dominion represents. (Hear, hear).

I hope nothwithstanding some of the remarks that have been made this evening that a way will be found for greatly increasing the trade relations between Canada and the Mother Country. I hope it will be found possible as your manufactures develop, as assuredly they will, to shift some of the trade between the Mother Country and over the border here, into Canada. (Hear, hear). Mr. Chamberlain we know is a sound man of business; he understands manufacturing and he understands commercial affairs, and I be-



SIR LLOYD WISE

lieve that if he be spared many of us shall yet live to see a great change, very much to the benefit of Canada and the Mother Country.

I will not say any more now because others have to follow, and you have to take the special train at two o'clock. I will merely say from the bottom of my heart, gentlemen, I most sincerely thank you for the great kindness and courtesy extended to me. (Applause).

MR. F. HASTINGS MEDHURST

Mr. Medhurst: Mr. Chairman, Mr. Ballantyne and Gentlemen, when I was informed yesterday that I should be permitted to respond with others to this important (to you it appears important) toast, I was not aware that it would fall to my lot to make my reply to-day, but however that may be it would ill befit me or any other of your guests to hesitate for a moment to express to you the genuine gratitude that we feel, and that I especially feel, coming from the Old Country, as I thought I should be coming, amongst strangers, but in reality coming not merely to fellow citizens but to men who have adopted me as one of themselves and who have decorated me with the insignia of their order. (Applause).

MISAPPREHENSIONS EXPLAINED.

In the few words that I propose to address to you I would like with your permission to clear up one or two misapprehensions that seem to exist in this country with regard to the proposals that Mr. Chamberlain has made with reference to preferential trade between the Colonies and the Mother Country. For example, it appears to be a wide spread opinion that Mr. Chamberlain has some desire or design to curtail or to restrict the natural development of the colonies, of Canada, and of Canadian manufactures in particular.

No such thought as that has ever entered Mr. Chamberlain's mind; that I can tell you most emphatically. No such expression as that has ever been given utterance to by him. Surely you must know the genesis of this movement so far as Mr. Chamberlain is concerned. He presided over two important colonial conferences, both of which, if I mistake not, were attended by your able and eloquent Premier, and at those conferences unanimous resolutions were passed to the effect that the way in which to bring about closer political relationship between the Mother Country and the British Dominions over seas was along the line of preferential trade or commercial interests. Mr. Chamberlain did his best whilst a member of the present Cabinet to persuade the Ministers with whom he co-operated to adopt a preferential tariff or preferential trade within the Empire as a part of their policy. Owing to the extreme conservatism of the British mind which has already been referred to this evening, he was unable to get his views accepted by the whole of his colleagues. Even the Prime Minister in England would not go the whole way with Mr. Chamberlain, and therefore Mr. Chamberlain, in order that he might in England express unstintedly the views of which he considered himself the proper mouthpiece, in order that he might have a free hand in this great Imperial mission, the self imposed mission he has undertaken, resigned his position in the Cabinet and became a private member of Parliament once more.

That being so, having made this sacrifice and having undertaken a very strenuous campaign at a time when most men are seeking leisure and repose, I ask you whether you think it is possible that he should wish the Mother Country to do anything to restrict her energies or output, or to do anything to hinder the development of the colonies, on whose behalf I say Mr. Chamberlain has undertaken his great and arduous task of convincing the British people that their past fiscal religion has been a mistake; that conditions have altered and that they must meet those new conditions with a new, an Imperial policy? (Applause).

No, gentlemen, Mr. Chamberlain's view of the matter is this. He is no theorist but a practical man; he looks around and he sees that in spite of your protection, in spite of the protection of America, in spite of the protection of Germany and France and Belgium, all these countries do import manufactured goods; he believes—and I think you will agree with him—that if you cannot at present meet the whole of the demand in your home market for the commodities required it would be better for you, aye, and better for us, that you should get these commodities which you do not or cannot produce at the moment, from some portion of the British Empire, rather than that you should purchase them from your commercial, and if opportunity were offered from your very material rivals and opponents either to the south of this border line or in some foreign country. (Applause).

A STATESMAN; NOT A POLITICIAN.

It has been said by one or two speakers this evening that they see great difficulty in carrying out this policy, in carrying it into practical effect. I admit that there are difficulties, and I would ask you to consider for a moment what is the distinction between statesmen and politicians all over the world. The politician merely treads an old road and gives it a new name. The statesman strikes out a new path for himself. (Applause). That, gentlemen, seems to me to be the great distinction, and if Mr. Chamberlain chooses to adopt the better part, if he chooses,—and I thank God that he has done so,—not to be a politician, if he chooses rather to play the part of a statesman, an imperial statesman, if he chooses to strike out a new path for himself and the Empire, if he chooses to place ideals before the Empire which he may never see realized, I do not think that can be taken to his detriment. I do not think we ought to meet with our heads hanging down. I do not think we ought to meet in any spirit of pessimism. It seems to me that the best brains of Canada, and the best brains of Australia, the best brains of New Zealand and South Africa should combine with those of the Mother Country, and that they should do so as your Premier has suggested, meet at a round table conference and try to see if it be not possible, forgetting party politics, but remembering our great imperial mission, to weld this disjointed and disconnected Empire of ours into a great and glorious reality, fraught not with menace or threat to the rest of the world but fraught with universal peace, fraught with the greatest power that man has ever seen or dreamed of.

Gentlemen, this is the policy of Mr. Chamberlain, not to do anything that can hinder the development either of the colonies or of the Mother Country, but to do what we can so that the deficiencies of the various parts of the Empire may be met by the other portions of it, so that we may unite in a great attempt to do something to make the British name and British power and prestige a reality.

PROSPEROUS WORKMEN.

And then again we have been told, and this perhaps is the most insidious objection of all, that Mr. Chamberlain proposes to make the food of his own countrymen dearer

in order to benefit you colonists here. Well, there is some truth in some tenets of political economy, and one of the leading tenets of political economy and one of the facts of every day life is that the price of a commodity is largely governed by the relations of supply and demand, and if Mr. Chamberlain can do anything with his preferential scheme to help to develop the undeveloped wheat lands of this and some of the other colonies, it seems to me that the great influx of wheat that would be thrown upon the markets of the world would bring about, not an increase, but an absolute reduction in the price of bread to the British workman. I believe it would result in increased prosperity, and in the building up in this country of a greatly increased population of the best customers England has to-day and the better customers England will have to-morrow.

Gentlemen, in England unfortunately this great question has been dragged into the mud of party politics. I regret it. Mr. Chamberlain never intended it should be so. I need not go into the history of the latter, but unfortunately he had no sooner announced the policy than members of the opposition thought they had a great political battle cry and that they could persuade the people that what Mr. Chamberlain really proposed was to starve the people and reduce their employment at home. I do not think that that trick will last. I do not think the general election after the next will be lost to this cause of Imperial Reciprocity, though the next general election in England will probably be lost to the party that Mr. Chamberlain leads.

At all events you may be certain of this, that Mr. Chamberlain's personalities, that his determination, that his great idealism and his great imperialism have appealed to much that is best in the public and in the private life of England, and he has followers and lieutenants who will not leave this question, even though it may take ten years to bring about a really strong and united British Empire. (Applause).

REV. DR. BARCLAY

Rev. Dr. Barclay: Mr. Chairman, Sir Wilfrid Laurier, Mr. Ballantyne, and Gentlemen: I must thank you and those associated with you for the courtesy which has made me one of your guests this evening. My presence amongst the manufacturers of Canada may seem to require some little explanation. It is not long ago since I was made a member of the Institute of Mines. Since then I was made a member of the Insurance Institute. Perhaps it does not need any very lively imagination to connect me with insurance, the only thing differentiating me from my brother insurers being the nominative risk. I now find myself a manufacturer.

I hope no one will unkindly suggest that the ground on which the invitation was extended to me is that I have been a persistent manufacturer of dry goods. Gentlemen, I am here as a minister, and I claim the right of a minister to mingle with men of all classes and of all avocations. (Hear, hear). If the Church is to be true to its mission, and if it is to have power in its message it must keep itself in touch with men, with all men, and with men in that which is their main line of life.

THE TIE THAT BINDS.

Many solvents have been suggested for the problems that agitate Society to-day. I am convinced that the only true solvent lies in the declaration which the Church has been entrusted to make to all men. It is not an omen for good to my mind, it is an omen for evil, when the ties that bind Church and State and Church and Commerce, and Church and Labor are severed. That that tie if not severed, has been somewhat loosened and weakened is, I am afraid, undeniable. There are men in our communities who stand aloof from the Church, who look askance upon it. There are men in our own community, men of influence and wealth, who seem to regard the Church as an incalculable quantity, as something they can do without, or as something that cannot do them any good. I think this is bad for the Church, bad for both. I would appeal to these men and say, we need you, we need your presence, your influence. I will not say we need your money, for far beyond your money we need your example. I would say to these men it is bad for you. Your lives are not strengthened but weakened by your absence from the Church. It can do you no harm, it can do you great good to unite in common worship with your fellow men at the throne of a common Father.

SECULAR CHRISTIANITY.

I do not want to take up your time. It has been sometimes said to us, we are apt to secularize our religion. I maintain that Christianity is not only the most sacred, it is the most secular thing on earth. It is the divine right to go down into the haunts of men, into the transactions of commerce, into the interchange of trade. There is no condition of life, there is no question of conduct that the Church does not touch, and our aim and our effort should be to touch everything and to take possession of everything in the name of Christ.

Gentlemen, we do not wish to be partizans. We have no right I think to interfere in the questions of party politics. It is not our province to say whether there shall be tariff or no tariff, high tariff or low tariff. But we are citizens, and we are interested as much as, perhaps more than, most people in everything that appertains to the welfare and reputation of our country. It is for us to see so far as we can see, that national prosperity shall be accomplished by national purity and national piety. It is ours to see so far as we can, that success shall be accompanied by honesty, by justice, by charity. It is ours to say, gentlemen, and I hope you are united with us in saying, and I apply the saying to my own profession, as well as to all your avocations, in the spirit of the poet's lines:

"Oh that in our country there might be, a duty on hypocrisy; a tax on humbug, an excise on all frauds and shams, and dishonest plausibilities." (Applause).

The President: Gentlemen, that closes the toast list but before we separate I would like you all to join in singing the National Anthem.

At 2 o'clock p.m. the banquet was closed by the singing of "God Save the King."

Among the many noticeable features of the Convention Banquet, and one that was much and favorably commented upon, was the very attractive and artistic menu card, the outside cover of which was produced in the highest style of pure steel plate engraving. This little *chef-d'œuvre* was produced by the British American Bank Note Company and will no doubt be kept and prized by those who were fortunate enough to be present, as a valuable souvenir of this very notable gathering.

Those who attended the reception given by Mr. and Mrs. Drummond at their summer residence in Mount St. Bruno will be pleased to learn that some splendid souvenirs of this enjoyable event are obtainable in the form of group photographs, one of which, on a greatly reduced scale, is reproduced elsewhere in this issue. The work from an artistic point of view is all that can be desired; the grouping is artistic, the faces are clear and easily recognized, while the beautiful house and grounds form a charming background. Copies may be ordered through the Secretary, Canadian Manufacturers' Association, Toronto.

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SECRETARY

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J. P. Longard, Longard Bros., Halifax
W. B. Taylor, The Robert Taylor Co., Limited, Halifax
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A. F. Pelton, Rhodes, Curry & Co., Limited, Amherst
H. L. Hewson, Hewson Woollen Mills, Limited, Amherst
Harvey Graham, Nova Scotia Steel & Coal Co., Limited, New Glasgow
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CHAIRMAN

G. A. Vandry, J. Arthur Paquet, Quebec

VICE-CHAIRMAN

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SECRETARY

Jos. Picard, The Rock City Tobacco Co., Limited, Quebec

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J. S. Langlois, J. S. Langlois & Co., Quebec
Geo. E. Amyot, Dominion Corset Manufacturing Co., Quebec
Dr. E. Morin, Dr. Ed. Morin & Cie, Quebec
Major T. Hethrington, Thos. Hethrington, Quebec

CONSTITUTION AND BY-LAWS

—OF THE—

Canadian Manufacturers' Association

(INCORPORATED)

CONSTITUTION

The Constitution of the Association is contained in the following Act of Incorporation which was passed by the Senate and the House of Commons of Canada, 1902:

ACT OF INCORPORATION.

Whereas the persons hereinafter named have, by their petition, represented that they and others have for some time past been associated together under the name of The Canadian Manufacturers' Association, and have prayed that it be enacted as hereinafter set forth, and it is expedient to grant the prayer of the said petition: Therefore His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

Incorporation.

1. W. K. Gorge, J. J. McGill, Geo. Booth, A. Campbell, C. R. H. Warnock, H. Cockshutt, James Goldie, W. C. Breckenridge, T. H. Smallman, J. B. Henderson, J. O. Thorn, S. M. Wickett, Wm. Stone, J. H. Housser, R. J. Christie, Geo. H. Hees, J. R. Shaw, John M. Taylor, Thos. Roden, J. P. Murray, A. W. Thomas, E. G. Gooderham, P. H. Burton, Frederic Nicholls, C. N. Candee, R. Millichamp, E. C. Boeckh, R. Y. Ellis, Frank Paul, the Honourable J. D. Rolland, W. W. Watson, A. E. Ogilvie, Wm. McMaster, Jas. Davidson, C. C. Ballantyne, G. W. Sadler, P. W. Ellis, J. F. Ellis, A. E. Kemp, W. K. McNaught, Edward Gurney and such others as are now members of the Association mentioned in the preamble, together with such others as hereafter become members of the Association hereby incorporated, are incorporated under the name of "The Canadian Manufacturers' Association," hereinafter called "the Association."

Objects.

2. The objects of the Association shall be to promote Canadian industries and to further the interests of Canadian manufacturers and exporters, and to render such services and assistance to members of the Association and to manufacturers and exporters generally, as the Association shall deem advisable from time to time.

Existing Officers and By-Laws Continued.

3. The members of the Association who, at the time of the passing of this Act, hold office in, or are members of any committee of the unincorporated Association, shall continue to hold the same offices, and to act on the same committees, until the next annual general meeting of the Association; and in like manner the Association shall continue to work under the existing constitution, by-laws and regulations of the unincorporated Association until the next annual meeting of the Association, and from that date the Association shall have such officers and committees having such powers and duties as the Association may, from time to time, by by-law or resolution determine.

Head Office.

4. Until otherwise determined by the Association, the head office of the Association shall be in the city of Toronto, in the Province of Ontario.

By-Laws, Etc.

5. The majority of the members of the Association present at any annual or special meeting called for that purpose may make by-laws rules and regulations for the government of the Association, including by-laws providing for the admission, suspension, expulsion or retirement of members, and for the imposing of fees, subscriptions and penalties, which shall be binding upon all members of the Association, and on all its officers, servants, and others lawfully under its control.

Powers of Association.

6. The Association may:—

(*a*) Publish such pamphlets, periodicals or other publications as are deemed advisable in the interests of the Association or any of its members;

(*b*) Organize, establish, regulate and dissolve branches or sections of the Association, but no such branch or section shall be deemed to be a separate corporation;

(*c*) Engage in the work of developing and promoting the export trade of Canadian goods by such means as may be considered desirable by the Association;

(*d*) Obtain information and statistics for its members, or for Canadian manufacturers and exporters, and render to them such other services or assistance as may be deemed advisable;

(*e*) Purchase or acquire real property, and mortgage, lease, sell or otherwise alienate the same provided that the value of such property held by the Association at any one time shall not exceed fifty thousand dollars.

Arbitration Powers.

7. The Association may provide by by-law for the appointment of arbitrators, members of the Association, to hear and decide controversies, disputes or misunderstandings relating to any commercial matter which may arise between members of the Association or any person whatsoever claiming by, through or under them which may be voluntarily submitted for arbitration by the parties in dispute.

2. Members assenting to an arbitration by an instrument in writing shall be understood to have submitted to the decision of the majority of the arbitrators appointed to hear the case and to decide upon the same.

3. The arbitrators appointed to hear any case submitted for arbitration as aforesaid may examine upon oath (which oath any one of such arbitrators is hereby empowered to administer) any party or witness who appears before them, and shall give their award thereupon in writing, and their decision or that of a majority of them, given in such award shall be final and binding upon the parties.

Committees of Enquiry.

8. The Association may, by by-law or resolution, provide for the appointment of committees of enquiry to enquire into any matter affecting the manufacturing import or export interests of Canada, and such committees may ex-

amine upon oath (which oath any member of said committee is hereby empowered to administer) any party who appears before them, and the evidence so taken may be used to assist the Association in arriving at a decision with reference to the matter under consideration.

Notices of Meetings.

9. All meetings of the Association shall be called by notice mailed to each member at least fifteen days before the holding of such meetings and all notices of special meetings shall state the objects of such meetings.

BY-LAWS

MEMBERSHIP.

There shall be three classes of members, Active, Honorary and Correspondent. Active members shall consist of ordinary and life members.

Active Members.

Active membership in the Association shall be open to individuals, firms and corporations, or individual members of firms or corporations actively engaged as manufacturers in the Dominion of Canada. Candidates for active membership shall sign an application. This application shall be signed by an active member as proposer and by another active member as seconder, and be forwarded to the Secretary. Such application shall be acted upon by the Executive Council after report by the Reception and Membership Committee.

Honorary Members.

Honorary members shall be elected only by unanimous vote at the annual general meeting. They shall have the same privileges as active members but may not vote or hold office.

Correspondent Members.

Correspondent members shall be elected by the unanimous vote of the Executive Council for the term of one year or at the pleasure of the Executive Council. They shall be furnished with credentials as representatives of the Association in British or foreign trade centres and shall have the same privileges as honorary members.

Life Members.

Any ordinary member in good standing may, after at least one year's membership, become a life member on payment in advance of ten annual subscriptions, or may be elected by unanimous vote at the annual general meeting in consideration of services rendered to the Association.

MEETINGS.

The fiscal year of the Association shall commence on the first day of August of each year. The annual general meeting shall be held within the eight weeks succeeding August 1st. It shall be convened in such place as may be decided upon by the Executive Council; to receive the report and financial statement of the Executive Council for the past year; to elect the officers, Executive Council and Committees for the ensuing year, and for all other general or special purposes relating to the management of the Association's affairs.

The annual general meeting and all special meetings of the Association shall be called by the President. The President may call a special meeting of the Association at his own pleasure and shall do so at the written request of ten active members within three days of his receipt of such request.

OFFICERS.

The officers shall consist of a President, a First Vice-President, and an additional Vice-President from each Province represented in the Association, a Treasurer and such other officers as the Executive Council may from time to time see fit to appoint.

Duties of Officers.

President—It shall be the duty of the President to preside at all meetings of the Association and of the Executive Council, and to enforce compliance with the Constitution and By-laws.

Vice-Presidents—It shall be the duty of the Vice-Presidents, in the order of their election to assist the President in the discharge of his duties, and in his absence to officiate in his stead.

Treasurer—The Treasurer shall receive and pay out all moneys on behalf of the Association and deposit with a chartered bank, to the credit of the Association, all moneys received. He shall, in conjunction with the Secretary, sign all cheques and have them countersigned by the President or one of the Vice-Presidents, or such other person as may be designated by the Executive Council. He shall cause to be kept the accounts of the Association, and have the same prepared, together with a balance sheet thereof, for the inspection and signature of the auditors, and shall, in conjunction with the auditors, prepare and certify the statements for the annual meeting.

Secretary—The Secretary shall be appointed annually by the Executive Council. He shall carry out the instructions of the Executive Council, and shall keep a true and correct record of all proceedings of the Association, a correct list of the members and their addresses; shall conduct the correspondence of the Association; issue notices to the members of the Association and of the Executive Council, and of the meetings of all the Committees; he shall collect and carefully preserve all books, papers, letters and documents relating to, or of interest to the Association; shall be remunerated for his services at the discretion of the Executive Council.

He shall have the custody of the Seal of the Association and shall keep the books, papers and records of the Association, all of which he shall deliver up when directed to do so by the President or Executive Council, to such person as he or they shall direct, and shall perform all duties which the nature of his office may require, or the Executive Council may order. The books and accounts shall be kept at the head office of the Association, and shall be open to the inspection of any member of the Executive Council during business hours.

COMMITTEES.

The officers shall be ex-officio members of all Committees. All committees shall meet at the call of their Chairman, promulgated through the Secretary.

1. The Executive Council shall be composed of the President, Vice-Presidents, Treasurer, and Chairmen of the Branches, of the Association, the Chairmen of the Sections of the Association, and one member for each fifteen members of the Association as determined by the membership on the day of annual meeting.

The Branches of the Association, outside of the city where the head office is located, may be represented at the meetings of the Executive Council by any of the members of their local Executive, the maximum voting power of the several Branches remaining the same as provided in the preceding clause.

All Past Presidents of the Association, while remaining Active Members, shall be ex-officio members of the Executive Council.

2. The Tariff Committee, the Railway and Transportation Committee, the Parliamentary Committee, the Reception and Membership Committee and the Commercial Intelligence Committee shall each consist of ten active members with power to add to their numbers.

3. The Committee on INDUSTRIAL CANADA shall consist of five active members with power to add to their number.

4. The Chairmen of the various standing committees shall be constituted each year for the special work of the Annual Meeting, a Committee on Resolutions and Nominations.

Duties of Committees.

All Committees shall keep a correct minute book of their proceedings and report to the Executive Council after each meeting.

Executive—The Executive Council shall be the official Committee of the Association. It shall receive and pass upon reports of all committees, advise and instruct the general officers and shall, in all matters, act as the representative of the Association when the latter is not in session.

Tariff—The duty of the Tariff Committee shall be to hear, consider and act upon all applications from manufacturers who may desire the assistance of the Association where concerted action may be deemed necessary in behalf of any particular industry, or of the manufacturing interests of the whole country.

They shall be alive to any changes in the Canadian tariff and watch the interests of Canadian manufacturers and exporters.

Railway and Transportation—The duty of the Railway and Transportation Committee shall be to endeavor to bring about an equitable rate of freights on the Canadian railways, and may be appealed to by any member of the Association who wishes to have a grievance redressed.

They shall give attention to all matters affecting transportation and communication which may, from time to time, become of importance to the trade and commerce of Canada.

Parliamentary—The duty of the Parliamentary Committee shall be to give attention to all legislation affecting the interests of Canadian manufacturers.

Reception and Membership—It shall be the duty of the Reception and Membership Committee to look after the reception and entertainment of distinguished guests. They shall arrange for special entertainments, lectures and banquets from time to time as they may think necessary in the interests of the Association.

This Committee shall have power to devise means for securing new members, and shall recommend to the Executive Council for acceptance such applications for membership as they believe desirable.

They shall endeavor also to form branches of the Association in the large trade centres of the Dominion.

Commercial Intelligence—This Committee shall have power to deal with such questions as the metrical system, moneys, weights and measures; technical and industrial schools and schools of applied art; a national museum of manufactures and fine arts; expositions held in Great Britain and foreign countries, and all information that will be beneficial to Canadian exporters.

This Committee shall establish a bureau of information to which members may apply at any time in order to procure reliable statistics as to imports, exports, the possibilities for extending trade, foreign contracts, tariff regulations, banking systems, etc.

They shall also recommend to the Executive Council for appointment the Correspondent Members of the Association.

Industrial Canada—This Committee shall deal with all questions relating to the editorial and business management of INDUSTRIAL CANADA, the official publication of the Association. Questions of general policy shall be referred to and passed upon by the Executive Council of the Association.

NOMINATION AND ELECTION OF OFFICERS AND COMMITTEES.

Nominations of the Officers and Committees of the Association shall be sent to the Secretary of the Association not less than two weeks before the Annual General Meeting, but no member shall be nominated unless his consent has been obtained.

The Officers, Chairmen of Committees and Committees shall be elected by a majority of the Active Members present at the Annual Meeting.

Wherever there is a provincial Branch of the Association established, it shall be asked to nominate its Vice-President to the Association, and its representatives on the Executive Council. Wherever local Branches are formed these shall have the privilege of officially nominating representatives to the Executive Council, the number of such nominations being one for each fifteen members of the Branch.

Should the Chairman of a Trade Section already occupy a place on the Executive Council, the Section shall nominate another representative.

Representatives to local Technical School and other Boards shall be elected by the local branches of the Association in which such Board is situated.

Local branches will be asked to officially nominate the representatives to which they may be entitled on any of the various Exhibition Associations within the locality in which the Branch is organized.

BRANCHES OF THE ASSOCIATION.

The Association may establish local or provincial branches in different manufacturing centres in Canada, on application by the members of the Association situated in such district or province. Such a branch shall consist of at least eight members of the Association, and shall be known as the ———— Branch of the Canadian Manufacturers' Association. The membership shall consist of those members of the Association situated within the locality designated by the Branch. The officers of such Branch to be a Chairman, Vice-Chairman, Secretary and Executive Committee. The officers and the committee shall be elected by the members of the Branch assembled in annual meeting at least three weeks prior to the annual meeting of the Association.

Branch Associations may deal finally with all matters of purely local interest.

They may also pass upon matters of general interest, and the result of their deliberations should be forwarded immediately to the Executive in the form of a recommendation to be considered by it or the whole Association.

The Secretary of a Branch shall be an honorary officer. If a salaried officer is necessary, he shall be employed by the Executive Council, and receive his remuneration from the Head Office.

Ten per cent. of the fees of a Branch can be drawn upon annually by such Branch for local expenses without special application to the Executive Council. If any further amount is required, special application must be made to the Executive Council and be passed upon by it.

No Branch of the Association shall incur any liability in the name of the Association beyond the ten per cent. mentioned in the foregoing clause, and a report of the finances of each Branch shall be presented to the Executive Council at the meeting previous to the close of each fiscal year.

TRADE SECTIONS.

The Association may from time to time establish trade sections to be composed of those members of the Association engaged in any particular industry or trade. Such organization shall be known as the ———— Section of the Canadian Manufacturers' Association.

The membership of such section shall consist of the members of the Association engaged in the particular trade, who apply for membership in the section. The officers shall consist of a Chairman, Vice-Chairman, Secretary and an Executive Committee.

The officers of the Committee shall be elected annually by the members of the section prior to the election of officers in the annual meeting of the Association.

Sections of the Association may deal finally with all matters affecting only their own industry or trade. They may also pass upon matters of general interest and the result of their deliberations should be forwarded immediately to the Executive Council in the form of a recommendation to be considered by it or by the whole Association.

Ten per cent. of the fees of members of the section may be drawn upon annually by such section for any expenses connected with its own business without special application to the Association. If any further amount is required, special application must be made to the Executive and be passed upon.

VISITORS.

Visitors of note may be introduced by any member of the Association, and have all the privileges of the Association rooms.

AUDIT.

An Auditor or Auditors shall be appointed every year by the members at the annual meeting, whose duty it shall be to audit and examine the books, vouchers and accounts of the Association, and to certify to the correctness of the balance sheet, for submission to the Executive Council as soon after the close of the financial year as possible. His remuneration shall be fixed by the Executive Committee upon the recommendation of the Finance Committee.

ORDER OF BUSINESS.

The order of business at the annual general meeting and at all other meetings of the Association shall be as follows:

1. Reading minutes of previous meeting,
2. Business arising out of minutes,
3. Receiving communications,
4. President's address,
5. Secretary's report,
6. Treasurer's report,
7. Reports of Standing Committees,
8. Reports of Special Committees,
9. Unfinished Business,
10. New Business,
11. Notices of Motion,
12. Election of Officers,
13. Election of Standing Committees,
14. Appointment of representatives to Industrial Exhibitions,
15. Induction of Officers.

This order of business may be suspended or varied at any meeting by two-thirds vote of those present.

QUORUM.

At all meetings of the Executive Council not less than five members must be present to constitute a quorum.

CONDUCT OF MEETINGS.

All meetings of the Executive Council and of Standing Committees shall be conducted as follows:

1. If there should be no quorum within 15 minutes of the time fixed for the meeting an adjournment may be had.
2. Any member who may desire to speak must address the Chair. All motions must be made in writing. Any member who may have already spoken to a motion must obtain permission from the Chair to be again heard regarding it. The Chair may, at any time, announce that the subject is open for conversational discussion.
3. The Chair shall decide all questions of order.
4. A motion to adjourn shall always be in order.
5. In voting no proxies shall be allowed.
6. All motions shall be decided at meetings of the Executive Council or Committees by a majority of those present. In cases where the number of votes is equal, the President or Chairman, besides his own, shall have a deciding or casting vote.
7. With the exception of clause (1) the above rules shall govern the conduct of the general annual meeting and other meetings of the Association.

EXPENSES.

No liability shall be incurred in the name of the Association by any of the members or committees until it shall have been approved by the Executive Council.

All Bills must be sanctioned by the Executive Council and paid by cheque. Employees' salaries shall be fixed by the Executive Council.

DUES AND PRIVILEGES.

The Annual Membership Fee in this Association shall be, for members employing under one hundred employees, $10; for members employing one hundred or more employees, $25; for each additional member, after the first, from any firm, $10. The first payment shall become due on the election of a member, and each subsequent payment twelve months thereafter.

RESIGNATIONS.

All resignations of office or membership shall be in writing addressed to the Secretary, and shall be submitted by him at the next meeting of the Executive Council.

All dues must be paid in full before a resignation can be considered.

EXPULSION.

Any member may be adjudicated upon by the Executive Council, if charged in writing with conduct unbecoming a member of the Association. If in the opinion of a quorum of the Executive Council, action should be taken thereon, the President, or in his absence one of the Vice-Presidents, shall appoint a committee of five to investigate the charges made. The Committee with due diligence shall report in writing if the charges are sustained or not. The report having been considered by the Executive Council the member so charged shall be notified in writing at least ten days before final action by the Executive Council, by registered letter to his last known address, to appear at next meeting of the Executive Council to defend himself. The Executive Council may, by a majority vote present at such meeting, suspend a member for a period of time or expel on a two-thirds vote.

AMENDMENTS TO THE BY-LAWS.

The By-laws of the Association may be amended by a majority of the members of the Association present at any annual or special meeting called for that purpose, notice of such amendment having been given in writing to the Secretary twenty days prior to the date of the meeting, and it shall be the duty of the Secretary to forward to the members a copy of such amendment. It shall be in order that amendments to the amendment can be discussed and voted on at the same meeting.

Industrial Canada.

ISSUED BY

The Canadian Manufacturers' Association,
Incorporated.

"There be three things which make a nation great and prosperous: A fertile soil, busy workshops, and easy conveyance for man and goods from place to place."—Bacon.

Vol. V. TORONTO, OCTOBER, 1904. No. 3

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association, and devoted to the advancement of the commercial prosperity of Canada.

INDUSTRIAL CANADA circulates to

1. All Members of the Canadian Manufacturers' Association.
2. The British Consuls, the world over.
3. Chambers of Commerce in the United Kingdom.
4. Foreign and home exchanges.
5. Miscellaneous subscribers at home and abroad.

RECEIVED BY MEMBERS FREE. Subscription price to non-members $1 per year.

Advertising rates on application.

Address all communications, subscriptions, advertisements, etc., to "SECRETARY," Canadian Manufacturers' Association,
(Incorporated)
Head Office, Toronto, Canada.

BUYING MUCH MORE THAN WE SELL

THE last Trade and Navigation report of the Dominion Government shows that during the month of July, 1904, there was imported for consumption in Canada $18,019,898 worth of merchandise as compared with $18,714,564 in July, 1903, a falling off of $694,666. The exports of Canadian products were valued at $13,863,301 as compared with $16,356,417 for the same month last year, a decline of $2,493,116. If the decline continues throughout the current fiscal year the total falling off in our commerce will be very large. But while the total trade has greatly decreased there has been a remarkable increase in the adverse balance. In July, 1903, the value of imports for consumption exceeded the value of domestic products by $2,358,147; in July, 1904, the value of imports for consumption exceeded the value of domestic exports by $4,256,597. The trade balance against Canada for the fiscal year 1902 was only $460,427; for the fiscal year 1903 the adverse balance was $10,399,854; for the fiscal year ending June 30, 1904, it was $45,171,985. Judging from the experience of July the adverse balance during the current fiscal year is likely to be much greater than that of last year. If the Klondyke gold nuggets and gold dust carried off to the United States were not included in our domestic exports the showing would be still more unfavorable to Canada.

How can we pay the interest on loans and the dividends on Canadian stocks and bonds held in Britain and other countries if the adverse balance of trade continues to grow in this way? There are only two ways of paying for the goods we buy in foreign countries, by goods or by gold. A continuation of the present trade conditions must result in Canada being completely drained of gold. A reckoning must come some day. A wealthy nation like Britain, with money out at interest in all the countries of the world, may be able to afford to buy more than it sells for a long series of years, but a young country like Canada cannot do it. If we continue it much longer it must end in a disastrous collapse ruinous to every Canadian industry.

THE FARM, THE MINE AND THE WORKSHOP

"THE only real prosperity is that which comes from the development of the farm, the mine and the workshop."—*Toronto Weekly Sun*, Sept 21.

Why is it then that *The Sun* so persistently endeavors to create in the minds of Canadian farmers a feeling of antagonism toward Canadian manufacturers? If the prosperity of the country depends upon the development of the workshop and the mine as well as the farm the interests of farmers, miners and manufacturers must be to a great extent identical, and instead of trying to set the farmers against the manufacturers *The Sun* should endeavor to cultivate a feeling of sympathy and a desire for friendly co-operation between these great Canadian industries. *The Sun* is a well edited paper and it might be a great power for good in Canada if it would cease its attacks on Canadian manufacturers and instead of vainly trying to remove the high wall of protection that keeps Canadian farm products out of the United States market support measures for the development of the Canadian home market.

In the course of an editorial advising the people of the United States that if they want to secure reciprocity with Canada they had better hurry up, *The Sun* says: "As our cities grow in population their value as home markets for farm produce increases and the number of farmers whose fears can be played upon by the alleged danger to that home market from reciprocity increases also."

It is gratifying to know that *The Sun* is beginning to appreciate the growth of protection sentiment among Canadian farmers, and to recognize the value of home cities to the farmers. The growth of our Canadian cities depends almost entirely upon the development of Canadian manufacturing industries and it must be manifest to the editor of *The Sun* that the workshops cannot develop unless our farmers buy goods "Made in Canada." Every dollar sent to the United States for goods that could be just as well made in Canada retards the growth of our towns and cities and makes the home market less valuable to our farmers.

In an editorial referring to the Ontario tour of the Conservative leader, Mr. Robert L. Borden, *The Sun* says:

"Surely Mr. Borden was not serious in his statement that 'adequate protection' would add 25 to 100 per cent. to the value of Ontario farms. You cannot add to the value of the farmer's produce by curtailing his market; you can add to the value by extending his facilities for sale. Opening Buffalo, Cleveland and Detroit to the produce of Ontario farms would add 25 per cent. to the value of the farm lands in the section in which the leader of the Opposition began his tour."

Mr. Borden does not propose to shut the Canadian farmers out of the markets of Buffalo, Detroit and Cleveland. They are already shut out. The doors to those markets are locked and barred and the more we beg our United States neighbors to open

them the more determined are they to keep them closed. Neither Mr. Robert L. Borden nor Sir Wilfrid Laurier can unlock those doors. They do not hold the keys. But they can guard the doors that give entrance to our home markets and so foster the development of Canadian farms, mines and workshops. One Canadian eats as much United States meat as ten people in the United States eat of Canadian meat. One man in Canada consumes as much United States butter as ten men in the United States consume of Canadian butter. One Canadian eats as many eggs from the United States as eleven people over the border eat of Canadian eggs. It is not in the power of Mr. Robert L. Borden or Sir Wilfrid Laurier to make the people of the United States eat more Canadian meats, butter, cheese, eggs and other farm products, but they can cause Canadians to eat less of United States farm products and more of our home farm products by raising the customs tariff and shutting out produce from the United States. Moreover they can greatly increase the number of home consumers of farm products by raising the tariff high enough to give adequate protection to Canadian manufacturing industries. Every additional workman employed in a Canadian workshop increases the demand for Canadian farm products.

Miners of coal and iron, as well as factory workers, must eat farm products, but the development of the mines is dependent upon the development of the workshops. Only a small proportion of the coal produced by Canadian miners is used by farmers. The greater part of it is consumed in the towns and cities, either in the factories or in the houses of the workmen and all the people of the towns and cities who gain a livelihood by supplying the wants of workingmen. Excepting gold and silver the other minerals are valuable only because they can be used as raw materials by manufacturers and even gold and silver are used to a considerable extent by manufacturers.

THE DUMPING CLAUSE

In the September number of INDUSTRIAL CANADA it was shown that after its first introduction a number of changes had been made in the Dumping Clause of the Tariff Act, which made it less valuable to Canadian manufacturers in general and more inconvenient for Canadian merchants. It should be noted, however, that the Government have wisely accepted a suggestion made by the Executive Council of the Canadian Manufacturers' Association with reference to the administration of the Act. On June 16, 1904, the Executive Council of the Association passed a number of resolutions regarding the dumping clause, one of which was as follows :

"The Association is of the opinion that if this regulation is to be operated with any chance of success, the exporters in foreign countries who send goods to Canada should be required to accompany each invoice of such exports with a declaration stating not only that the prices named in the invoice are the ordinary credit prices in the manufacturers' market, but that no arrangement for rebate, reduction or compensation has been or is being made with the importing firm directly or indirectly."

The Government has adopted this proposal and a regulation to this effect has been issued by the Customs department. The regulation is said to have caused much annoyance to British exporters, who claim that it is impossible to always accurately state the current price in the British market in view of continual fluctuations. But if it is difficult for the British exporter to state the current price in his own market of the goods he exports, how much more difficult it would be for the Customs officials at the five hundred ports of entry in Canada to determine the exact price in the markets of far-away countries. The regulation will undoubtedly be of great assistance to Canadian Customs officials, but it will not relieve them of responsibility. Honest British or foreign exporters may unintentionally make mistakes and dishonest ones may do so designedly. Two exporters of the same class of articles may value them differently. The Canadian Customs officials will require to have an extraordinary knowledge of prices. They will be assisted, it is true, by the advice of experts in the leading markets of the world, but many mistakes are certain to be made. All this trouble and uncertainty could be avoided by imposing specific duties high enough to afford adequate protection to all Canadian industries.

IMPERIAL PREFERENTIAL TRADE

CANADIAN manufacturers, while emphatically endorsing the principle of Imperial Preferential Trade, have taken pains to explain to British statesmen that Canadian industries must have fair protection. We intend to go on developing industries in Canada ; we intend to make use of the raw materials and the water-powers with which Nature has so bountifully endowed our country and we intend to offset by a protective tariff any disadvantages that may exist at present owing to the higher wages of labor and higher rates of interest, etc. We have asked the Government to make our minimum tariff high enough to afford adequate protection to Canadian industries, but we do not wish to cut off all trade with the outside world. We believe that the commerce of the Dominion will continually increase in volume as the country grows in population and wealth and we wish to turn this trade into British channels so far as possible. The most effective way of doing this is to impose a high tariff on foreign products. When the representatives of Britain and Canada come together to discuss the possibility of helping one another by preferential tariffs we think it can be shown that it will be possible in this way to greatly increase trade between Canada and Britain without sacrificing Canadian industries. It should be our first aim to give work to those British citizens who are within the borders of our own Dominion, but when we have to go abroad to supply our wants, as we must always do to a great extent, we should give our fellow citizens in other countries of the Empire a preference over foreigners. If the people of the United Kingdom will in return buy from the colonies, so far as possible, those things which they may find it necessary to get abroad, all parts of the Empire will be benefited.

The British advocates of Imperial Preferential Trade do not misunderstand the attitude of Canadian manufacturers. Since Mr. Chamberlain began his campaign Canada has been visited by a number of eminent public men representing both sides of politics in the British Isles and the enquiries made by these visitors indicate that they clearly understand what Canadian manufacturers mean when they endorse the principle of preferential trade.

Mr. F. H. Medhurst, one of the Chamberlain candidates for the British Parliament, speaking at the banquet of the Canadian Manufacturers' Association in Montreal on Sept. 22, said :

"It appears to be a widespread opinion that Mr. Chamberlain has some desire or design to curtail or to restrict the natural development of the colonies, of Canada and Canadian manufacturers in particular. No such thought as that has ever entered Mr. Chamberlain's mind I can tell you most emphatically ; no such expression as that has ever been given utterance by him." After some reference to the genesis of the Chamberlain movement Mr. Medhurst continued : "Mr. Chamberlain's view of the matter is this. He is no theorist but a practical man ; he looks around and sees in spite of your protection, in spite of the protection of America, in spite of the protection of Germany and France and Belgium, that all these countries do import manufactured goods, and particularly—and I think you will agree with him—he thought if you cannot at present meet the whole of the demand for the commodities you require it would be better for you, aye, and better for us, and if better for us then better for you, and if better for you then better for us, that you should get these commodities, which you do not or cannot produce at the moment, from some portion of the British Empire rather than that you should purchase them from your commercial and, if opportunity were offered, from your very material rivals and opponents either

to the south of this border line or in some foreign country . . . . Gentlemen, this is the policy of Mr. Chamberlain, not to do anything that can hinder the development either of the Colonies or of the Mother Country, but to do what we can so that the deficiencies of the various parts of the Empire may be met by the other portions of it."

OUR SISTERS OF THE PALMS

"THERE is no more noble object for the young giantess of the Maple Leaf than to take steps to insure that her sisters of the Palms shall not for their daily bread be forced to seek a foreign alliance," said Hon. R. H. McCarthy of Trinidad in the course of an interesting speech at the banquet of the Canadian Manufacturers' Association in Montreal on September 22.

The present position of the British West India Islands and British Guiana is unfortunate. The policy of expansion recently inaugurated by the United States has already resulted in bringing many tropical islands under United States control. Hawaii, the Philippines and Porto Rico are now recognized as possessions of the United States, and Cuba is more truly a dependency of the United States than Canada is of Britain. All these tropical islands have a preference in the markets of the United States, and the British West India Islands are thus placed at a great disadvantage. It is not surprising, therefore, that some of the people of the West India colonies are beginning to seriously talk of annexation to the United States as a remedy for their troubles. With far less reason many Canadians looked to Washington for twenty years after Confederation was consummated.

That the United States would gladly welcome the British West Indies into the Republic is certain and it is by no means certain that the British Government would refuse to sanction the transfer if desired both by the colonists themselves and the people of the United States. But Canadians cannot afford to sit idly by while these tropical colonies drift out of the Empire, and the time has come for our Government to seriously consider what Canada can do to compensate them for the losses sustained through the adoption by the United States Government of a policy of preference for the products of its tropical dependencies.

There is no doubt that the Canadian demand for tropical products will enormously increase during the next twenty years. It is reasonable to expect that the population of the Dominion will double within that time and as we have no southern territory we must import more southern products per head of population than the United States, which within its own borders, without even drawing upon its tropical dependencies, can produce cotton, cane sugar, rice, tea, oranges, figs, and a variety of other southern products that could not possibly be economically grown in any part of Canada. Two conclusions may be drawn from Canada's deficiency in this regard. One conclusion is as Canada develops in population and wealth free entrance to our markets will be worth more to the people of the British West Indies than free entrance to the markets of the United States would be. The other conclusion is that Canada would be placed at a very great disadvantage if the British West India colonies became part of the United States, because we would be almost absolutely dependent upon our neighbors for southern raw materials, and if they wished to coerce us they could easily do so by prohibiting exportation of such articles. Canadians in general are disposed to favor the imposition of export duties on pulp wood and unrefined nickel in order to force the manufacture of these raw materials into finished products in Canada. It is quite possible that the people of the United States may at some future time favor a similar policy regarding the raw materials of which they have a monopoly. The United States constitution will not permit the imposition of export duties, but there is nothing in the constitution to prevent Congress from passing laws prohibiting the export of certain raw materials.

The British West Indies are by no means densely populated, but Trinidad and British Guiana receive annually a large number of immigrants from the British East Indies. These immigrants are proving a valuable addition to the population, being far superior to the negroes, and this movement of population is likely to soon extend to Jamaica and the other British islands. With increasing population the demand for Northern farm products and manufactured goods must increase, and under favorable conditions there ought to be a great expansion of Canadian trade in that direction. The British West Indies are the natural complement of the Dominion. They can supply the very products that we cannot grow and must import, and we can send them such northern products as cannot be successfully grown in their tropical climate. They are not naturally adapted for the development of extensive manufacturing industries, while Canada offers special advantages for such industries. Consequently, Canadians do not need any protection against the British West Indies, and it would be wise policy for the Government at Ottawa to endeavor to arrange for unrestricted reciprocity between the Dominion and those tropical colonies. Absolute free trade between Canada and the British West Indies would wonderfully stimulate trade of the right kind. Such a policy should have the support of every Canadian protectionist. It is quite in accord with protectionist principles to admit free of duty articles that cannot be produced within the country. There would be some loss of revenue, but the expansion of Canadian trade would more than compensate for this.

As an accompaniment to unrestricted reciprocity a first-class steamship service should be established between Canadian ports and those of the West India colonies. Frequent, speedy and cheap communication would be essential to profitable commerce.

Such an arrangement with the British West Indies would probably be advantageous to every section of the Canadian community, but Canadians should not look at the matter purely from a selfish point of view. It is part of the mission of the British Empire to look after the welfare of tropical peoples, and Canada can best perform her part of this duty by helping her little sisters of the Palms, as Hon. R. H. McCarthy so aptly termed the British West India colonies.

CANADA AND IMPERIAL DEFENCE

CANADIAN manufacturers and Canadian business men in general are strongly in favor of Canada taking a more active part in the defence of the Empire than in the past. Canadians will never consent to any arrangement by which the British Parliament will tax Canada for war purposes. Any contribution we may make toward the defence of the Empire must be purely voluntary and the expenditure must be controlled by our own Parliament, but we do not want our Government to be at all niggardly in providing for defence. The taxpayers of Britain should not be expected to provide for the defence of Canada, and so long as they are, Canadians will occupy a mean position in the eyes of the world at large. Let our Government provide generously for the defence of Canada, taking care while doing so to retain control of all expenditures.

DISCOVERY OF TIN IN MANITOBA

A large deposit of tin bearing ore is said to have been discovered by two Rat Portage men in Eastern Manitoba, about three and a half miles from the Ontario boundary line and south of Cross Lake. In appearance it is exactly like the Cornwall tin ore, and upon roasting yields a button carrying 98¼ per cent. tin. The body is reported to extend for over a mile and to be from 50 to 100 ft. wide.

If subsequent investigation should bear out the statements made in the press, the discovery will mark an epoch in Canadian mining. There is no known body of tin ore in Canada, and none in the United States. The discovery of tin in Canada, therefore, would be an event whose importance it would be almost impossible to estimate.

Transportation Department

DISCRIMINATIONS

Cedar Ties and Poles—General Merchandise from Eastern Canada to Pacific Coast Cities—Lumber (Cedar) and Shingle Rates from Vancouver, Etc.—Cases Heard by the Railway Commission.

THE absence of "Transportation Department" from the issue of September is regretted. The editor was absent in Vancouver previously to and during the issuing of INDUSTRIAL CANADA for September. While a synopsis of the rate cases submitted to the Board of Railway Commissioners in Vancouver was dispatched east for the September issue, it did not arrive in time at headquarters.

It is proposed to discuss in this issue the cases presented for the consideration of the Board in Vancouver, and to refer to the case of Scobell v. Kingston and Pembroke Railway Co., of which mention has already been made in the columns of this magazine.

SCOBELL vs. K. & P. RAILWAY

For many years, and until the establishment of the Railway Commission, it was the practice of the railways of Canada, when they came in contact with limited supplies of tie timber (particularly cedar) to endeavor to restrain the holders of this timber, from cutting it until it had grown to sizes suitable for conversion into railway ties, and from disposing of it otherwise than to railway tie contractors. One mode of procedure served to secure the purposes of the railway companies. Wherever cedar swamps were situated in territory that might be considered exclusive to a railway company and the timber could not be cut for floating down driving streams, or whenever it was not released by the tie contractors as unsuitable for railway purposes, the practice of the railway companies was to impose such a rate for the transportation as would make it more profitable for the owner to dispose of his material to the tie contractors of the railway company.

SCOBELL'S COMPLAINT

The charge made by Mr. F. A. Scobell, of Cape Vincent, New York, against the Kingston and Pembroke Railway was, first, that discriminatory rates were imposed on the transportation of cedar lumber and railway ties and poles of all kinds made from cedar and capable of being used for railway purposes. Second, that unreasonable and excessive rates were imposed on the transportation of telegraph, telephone and trolley poles as compared with the rates on lumber, etc.

RATES ON K. & P. RY.

The judgment of the Board does not pass upon the second phase of this charge, which is left over for further consideration. The complaint was, that until the 1st of March the Kingston and Pembroke Railway charged for the transportation of cedar poles, ties, etc., from Flower Station to Kingston, a distance of 80 miles, a rate of 5 cents per 100 lbs., but effective March 1st the tariff was changed, so that while making no material difference in the rates as for lumber, the rate upon poles was advanced to 10½ cents, no rates whatever being quoted for ties. It was stated that on the latter commodity the rates since quoted, upon application, were prohibitory. The reason, urged by Mr. Conway, of the Kingston and Pembroke Railway, which the Commissioners characterized as remarkably frank, for the raising of the rates of the Kingston and Pembroke Railway upon certain products was that his Company desired to retard shipment, that the railways required these commodities largely for their own use, and that the Company's object was to restrict the output so as to assure the fulfillment of their future requirements. The Board considered that this avowal dispensed with the necessity of enquiring into facts, and laid the question squarely before them for decision, whether such a mode of dealing with traffic or such a system for supplying rates for transportation could be recognized as a proper and lawful arrangement? To quote from the judgment:—

> "The Railway Act, in conferring upon the Board a comprehensive jurisdiction to control and regulate railway rates invests it with a discretionary power, without appeal, of determining whether tolls for the carriage of merchandise are just, reasonable and free from discrimination, and we cannot hold, without doing violence to every just, equitable and common sense consideration, that the tolls complained of come under such category.
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> In the judgment of the Board the case is too clear for argument. Upon what sound, defensible principle can it be held that a Railway Company, enjoying, as it does, the privilege of a public franchise, should be allowed to single out a particular commodity, or class of commodities, and say to dealers in these goods: We cannot allow these articles to be shipped off our line to markets which you consider the best available, because we shall need all these products for our own use; and if you insist upon being given a rate, we will give you one, but it must be such a rate as will make it more profitable to you to sell to us at our price than to ship off our line of railway.
>
> This is in effect what is involved in and implied by the statement of the Company's General Freight Agent, and this is the attitude of the Respondent Company, as may be inferred from the facts before us, towards dealers and shippers of the class of goods in question. The attitude of the Company is, to say the least, a startling one. It means oppression in the severest form. It is an interference with the freedom and personal rights of the individual. It denies to a man the privilege of selling his goods when, where, and to whom he wishes. It says to a person who may have bought cedar bearing limits on the line of the Company's railway (induced thereto by the prospect of establishing a profitable business), you shall not reap the full fruits of your enterprise and investment, because we, the railway company, won't allow you. If you limit your production to what we will require of these commodities for our use and will supply us at a price we shall name, you may proceed to do business; but we will not carry your goods to an outside market and thereby possibly denude our own line of this class of railway material which we ourselves shall need.
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> In a case considered and decided by the Interstate Commerce Commission of the United States, similar in many respects to this, it was said by the Commissioners, in delivering judgment, that 'Common carriers, in making rates, cannot arrange them from an exclusive regard to their own interests, but must have respect to the interest of those who may have occasion to employ their services, and must subordinate their own interests to the rules of relative equality and justice.' To this statement of principle this Board fully subscribes.
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> We have no wish to characterize the Respondent Company's action in strong terms. The system complained of may have grown up and been adopted under misapprehension as to the relative rights of the shippers and railways, and it may be that there has been no deliberate intent on the part of the railways of using their power oppressively and injuriously to the interests of the producer, but whatever may have been the intent, wrong, and very grievous wrong, would in the nature of things be its effect, if it were permitted to be continued.

There is but one way we can suggest, consistently with law and morals, by which the railway companies can secure a monopoly of the cedar output along their lines, and that is by buying the cedar producing lands.

Our conclusion is that the charge of discrimination has been fully and completely established, and our order as respects this branch of the complaint will be that the Kingston and Pembroke Railway Company cease and desist henceforth and immediately from levying tolls on cedar and its products, such as lumber, ties, posts, telegraph, telephone and trolley poles, in excess of the tolls on other descriptions of timber and their products.

That the Respondent Company substitute for its present rates tolls which shall not discriminate between cedar and other woods. That the tolls on cedar and other ties be not higher than the tolls on lumber, to be published in the Company's Special Mileage Tariff on Lumber, etc., and that the tolls on cedar lumber, cedar posts and cedar poles of all kinds, be not made relatively higher than the tolls on other lumber, posts or poles, and that the Kingston and Pembroke Railway Company substitute a new tariff giving effect to this order, and submit the same within twenty days for the approval of the Board.

Inasmuch as we are led to believe that on other railways a system of varying rates and discrimination as against cedar and cedar products is in operation, and in order that such a system shall no longer obtain and continue in operation, the Board has deemed it advisable to make the order to the Respondnet Company, stated above, a General Order to all Railways within the jurisdiction of this Board.

It is further ordered that Canadian Freight Classification, No. 12 of May last, 1903, be amended under the heading of lumber, as follows, viz. : that rails, fence posts, telegraph poles and ties of all descriptions, which are now classified to be carried by the railways by special contract only, be added to the list of commodities which are included in the said classification, in the term "Common Lumber," and are therein classified 10th class in carloads, and that telephone poles and trolley poles (wooden) be also added to the said list."

Extended notice is given to this judgment for two reasons, —first, as showing the extent to which the transportation companies have gone when free of restraint ; second, as emphasizing the fact with which, before long, this country will be fully impressed, that for the inauguration of the principle of control of railways the country is now possessed of a reasonably effective railway act. It possesses in the Board of Railway Commissioners, an instrumentality through which much good may accrue. The regulation of railways under the old Act was not sufficiently effective. Because the arbitrary demands of the railway companies had not until recently warned the public of the necessity of having an effective form of regulation. Because, too, the Railway Committee, (administering the old Railway Act) composed of men dividing their time between multitudinous duties and responsibilities could not be expected to give the attention to these questions of transportation that they merit.

The Board of Railway Commissioners confines its attention to matters of transportation and the regulation of railways. It brings to bear on these questions the weight of trained, powerful and mature individualities. It is bound to correct these anomalous transportation conditions, which are the natural outgrowth of many years without restraint.

RATES ON GENERAL MERCHANDISE AND COMMODITIES FROM MONTREAL, TORONTO, ETC., TO VANCOUVER, VICTORIA, ETC.

Following up the articles which appeared in the February and March issues of INDUSTRIAL CANADA regarding the rates from Eastern Canada to Pacific Coast points, the Association submitted in writing to the Board of Railway Commissioners its objections to these rates. It was intended to take an early opportunity of laying the matter before the Railway Commissioners in open court. The opportunity did not offer itself in Toronto because the time of the Commission was limited. An opportunity arose during the visit of the Manager of Transportation Department to Vancouver. The Association's case was strengthened by the objections raised, to the same rates, by the Boards of Trade of Vancouver, New Westminster and Victoria.

In addition to those arguments outlined in the February and March issues the case of the Association was supported by the views of Prof. S. J. McLean upon the subject which we will quote later on.

The Board was informed that at one time the Buffalo and New York rates applied respectively from Toronto and Montreal and common points, a basis which is now denied the Canadian shippers ; also that on eastbound business from the Pacific Coast there is no question about conceding the Buffalo and New York basis to Toronto and Montreal.

WATER COMPETITION

Its attention was directed to the fact that the argument of water competition urged by the C. P. R., against the claims of the Association, is not a controlling factor in these rates



W. H. D. MILLER,
Manager, Transportation Department.

The rates from New York to the Pacific Coast, which might to some extent, not wholly, be influenced by water competition, are applied from interior points (in some cases the rates are lower from the interior) until the Mississippi River is reached. The rates applied to Portland, Ore., Seattle, Tacoma, San Francisco, etc., are also applied to a large number of points upon the Pacific Coast which are not subject to water competition, such as Mount Vernon, Wash., and about 200 towns of more or less importance. It is anomalous that Canadian rates to important centres like Vancouver, New Westminster and Victoria should be on a high basis of rates while the rates to points immediately across the boundary, like Blaine, Wash., (about 300 or 400 yards from the line) are on a low (water competitive ?) basis. The explanation lies in the Canadian customs tariff. The representatives of the Canadian Pacific Railway disclaimed any desire to take advantage of the customs tariff, but were nevertheless forced, in response to the questions of the Board, to admit that, if there were no customs tariff, if freight could be shipped without customs restriction or duty from New York, Buffalo, or Pittsburg, to Vancouver, etc., that the Eastern Canadian manufacturer and shipper would be unable to compete.

These higher rates are a reflection upon the Canadian communities involved.

These rates give advantages to the United States manufacturer in competing for the trade of the Canadian Yukon.

In respect to the Yukon trade, with a fair system of rates, and with the powerful influence of the C.P.R., and the assistance of the Canadian Customs tariff, is there any reason why the business should not be largely diverted to the Canadian manufacturer and shipper.

EXTENT OF DISCRIMINATION

The C.P.R. state that their rates to Vancouver and Victoria on the Yukon traffic are the same as the rates charged by United States lines to Seattle. (See quotation below from report of Prof. S. J. McLean.) This statement is only partly correct. The rates from New York and intermediate points (as far west as St. Louis and St. Paul) to Seattle are lower than from corresponding Canadian territory to Vancouver; lower by from 20 cents to 8 cents per 100 lbs., according to the nature and classification of the traffic.

EXAMPLES:

GENERAL CLASS FREIGHT FOR THE YUKON

Group No 1..... {New York, Boston, etc., Buffalo, Pittsburg, Chicago, St. Louis, St. Paul, etc.

Group No. 2..... {Montreal, Ottawa, etc., Toronto, Hamilton, London, etc.

TO SEATTLE, WASH., VANCOUVER, B.C., etc. —

	1	2	3	4	5
From Group No. 1..	$3.00	2.60	2.20	1.90	1.65 per 100 lbs.
" " No. 2..	$3.25	2.83	2.45	2.08	1.80 " "

The commodity rates show the same differences according to classification.

It may be true that the rates are the same from this United States territory on Yukon traffic forwarded to Vancouver or Seattle. It may be true that the rates are the same on Yukon traffic forwarded from Canadian territory to Vancouver or Seattle. The example shows that it does not follow that the rates on Yukon traffic are on a parity from shipping points in Eastern Canada to Vancouver or Seattle with those in effect to the same ports from the Eastern States.

PROF. S. J. McLEAN'S REPORT

Professor S. J. McLean's report of 1902 to the Honorable Minister of Railways, deals with the question of rates to the Pacific Coast. It takes cognizance of the fixed arbitrary on business from United States points, applicable to Vancouver, New Westminster and Victoria, over the rates to Seattle. The arbitrary is 5 cents per 100 lbs. Example :—

GENERAL CLASS FREIGHT.

From Group No. 1.. {New York, Boston, etc., Buffalo, Pittsburg, Detroit, Chicago, St. Louis, St. Paul, etc.

TO	CLASS RATES PER 100 LBS. 1	2	3	4	5
SEATTLE, etc.	$3.00	2.60	2.20	1.90	1.65
VANCOUVER, etc.....	$3.05	2.65	2.25	1.95	1.70

The difference is uniformly 5 cents per 100 lbs. for both class rate and commodity traffic.

DEFENSE OF C. P. R.

The report records the explanation of the C. P. R. as follows :— "We submit the fact that the volume of traffic to the United States Pacific Coast points is very much greater than to British Columbia points, and the cost of transportation is considerably less owing to the fact that the American lines have easier grades and a lower cost of operating."

"The net revenue to the C. P. R. on the slightly higher rates to British Columbia points is considerably less than the American roads receive on the lower rates. The C. P. R. also stated that it costs more to haul to Vancouver than to Seattle."

COMPETITION

"It is further stated by the C. P. R. that the only business in which there is competition between Canadian and American merchants is in the Yukon trade. The rate to Vancouver and Victoria on this particular traffic are exactly the same as those charged by the American lines to Seattle, so that the merchandise of these cities are on an exact parity. It is argued that the merchants of the British Columbia coast points do not come into competition with the Seattle merchants because the duty is sufficient to protect the former and that therefore the 5 cent arbitrary does not hurt them."

PROF. McLEAN'S VIEWS

Professor McLean expresses the opinion that the evidence submitted does not justify the British Columbia coast rates being placed on a higher level than the Seattle rates by the arbitrary of 5 cents. He adds that if the determining element in the tariff to the coast is water competition, in view of the fact that the difference by water between Victoria and Seattle is so slight, there would appear to be no virtue in the position advanced by the railway, no justification for putting the B. C. rate on a higher level."

COMPLAINT FROM NEW WESTMINSTER

The Board of Trade of New Westminster complained to Professor McLean regarding the discrimination against shipments from Eastern Canada, the discrimination complained of being the addition of arbitraries (ranging from 20 cents 1st class to 8 cents 7th class) to the Chicago-Seattle rates, in making the rates from Montreal to Vancouver and arbitraries ranging from 30 cents to 13 cents in making the rates from points east of Montreal as far as Halifax.

It is explained above that the rates from Chicago and New York are practically the same in the transcontinental tariff.

The following comparisons will illustrate the complaint of New Westminster.

GENERAL CLASS TRAFFIC TO NEW WESTMINSTER, VANCOUVER AND VICTORIA

Group No. 1..... {New York, Boston, etc., Buffalo, Pittsburg, Detroit, Chicago, St. Paul, St. Louis, etc.

Group No. 2..... {Montreal, Ottawa, etc., Toronto, Hamilton, London, etc.

Group No. 3..... {Halifax, St. John, etc.

	CLASS RATES PER 100 LBS. 1	2	3	4	5
From Group No. 1.....	$3.05	3.65	2.25	1.95	1.70
From Group No. 2.....	$3.25	2.83	2.40	2.08	1.80
From Group No. 3.....	$3.35	2.91	2.45	2.13	1 85

The same differences exist in commodity rates according to the classification of the traffic.

Though having no bearing upon the matter complained of by New Westminster the following taken in connection with the above will illustrate another phase of the rate situation.

GENERAL CLASS TRAFFIC TO SEATTLE, ETC.

	1	2	3	4	5
From Group No. 1.....	$3.00	2.60	2.20	1.90	1.65
From Group No. 2.....	$3 25	2.85	2.40	2.08	1.80

GENERAL CLASS TRAFFIC TO SAN FRANCISCO

	1	2	3	4	5
From Group No. 1.....	$3 00	2.60	2.20	1.90	1.65
From Group No. 2.....	$3.20	2.78	2.35	2.03	1.75

Here, too, the differences apply against the Canadian commodity rates according to the classification of the traffic.

WHY C. P. R. CONSTRUCTS

It does not appear from the above that the Canadian Pacific Railway is fulfilling one of the promises of its construction, the fostering, developing and bringing closer together of the extremes of the Dominion. Both ends of the line are subject to discrimination in these rates.

DEFENSE OF C. P. R.

To resume ; the reply of the Canadian Pacific Railway respecting these rates was : "The arbitraries, it should be explained, are added to the rates from Chicago to the Pacific Coast, and actually represent the difference between Chicago and the Pacific Coast, as compared, in Division A, with Montreal, an additional distance of 700 miles, and in the case of Division B, Halifax, an additional distance of 1,500 miles. It cannot be considered that the arbitraries as stated represent a high cost of transportation for the mileage given."

PROF. McLEAN

After referring to the fact that no arbitraries are added to the Chicago rates in making through rates from points east of Chicago in the United States, and stating that with only a few exceptions the commodity rates in the territory from Chicago and eastward on shipments to Pacific Coast terminals are covered by a blanket rate, and that class rates in that territory are also covered by a blanket rate, Professor McLean expresses himself "that the



A. D. CARTWRIGHT
Secretary Board Railway Commissioners for Canada

difference in rates as between the shipments from points in Eastern Canada to British Columbia and the shipments from the Eastern States to the Pacific Coast terminals, is attributable not to a difference in the length of the haul but to the enforcing, with the consent of the Transcontinental Freight Bureau, of a higher basis of rates.

INFLUENCE OF CANADIAN CUSTOMS TARIFF

Professor McLean is correct, but he apparently does not grasp the main reason for these discriminations which is the international boundary line, the Canadian customs tariff, and the purpose of the C. P. R. to harvest the advantage thereof.

THE C. P. R. AND THE LUMBER MILLERS OF THE PACIFIC COAST.

A complaint was lodged with the Railway Commissioners, during their recent visit to Vancouver, by the lumber millers of the Pacific Coast. As these manufacturers are largely represented in the Association, the case was presented to the Board by the Association's Manager of Transportation Department.

NATURE OF COMPLAINT

The complaint had reference to a discrimination in rates imposed upon cedar lumber and shingles from Vancouver, etc., to Manitoba points. The rates charged by the Canadian Pacific Railway from the Pacific coast to Winnipeg, and points common thereto, upon lumber are : cedar lumber (also shingles), 50 cents per 100 lbs. ; fir, spruce and other lumber, 40 cents per 100 lbs. This discrimination against cedar of 10 cents per 100 lbs. does not apply from the Canadian lumber mills in the mountains, from which to Winnipeg and common points the rate for lumber of all kinds is 33 cents per 100 lbs. Shingles from the mountain mills are charged 5 cents per 100 lbs. higher than lumber.

The east bound rates to St. Paul and Winnipeg and common points are, by agreement among the railways, usually the same. The rates charged by the Northern Pacific and Great Northern from Pacific coast points (United States) to St. Paul, and points common thereto, are 50 cents and 40 cents, the same as charged by the Canadian Pacific Railway to Winnipeg, etc.

REASONS FOR DISCRIMINATIONS

The railway company urged as the reason for this discrimination that it has to take care of the mountain lumber millers, who, it claims, are unable to secure cedar of the same quality as that obtained on the coast, and that the coast mills have their export trade. Only two of the numerous mills on the coast are doing an export trade ; the mill at Chemainus and the British Columbia Mills Timber and Trading Company's Vancouver mill. The reason for the discrimination, if it were a sound one (which it is not), is hardly the correct one. The discrimination exists only into Manitoba. In view of the application of the same rates for all lumber into the Territories from the coast mills and the same practice with regard to lumber from the mountain mills into Manitoba and the Territories, the real reason for the discrimination seems to be the agreement with regard to the maintenance of lumber and shingle rates which the railway officials were obliged to admit exists between the Canadian Pacific, the Great Northern and Northern Pacific railways. Apparently the Canadian Pacific Company does not regard the practice of discriminating against cedar as reasonable. It has broken away from that practice in local territories. Aside from this, the agreement is ill-advised, because it does not take into account the difference in conditions under which United States and Canadian coast mill men are operating.

The lumber millers of Washington and Oregon do not ship common or cull lumber, which from the Canadian mills constitutes about 85 per cent. of the output of the cedar log. On the United States side the mills convert the material capable of being manufactured into common and cull cedar lumber into shingles, of which the Washington and Oregon millers alone ship about 35,000 cars per year.

ADVANTAGES OF U. S. LUMBER MILLERS

The United States lumber manufacturers have other advantages not enjoyed by the millers of the Canadian Pacific coast : The advantage of a large home market on the coast and in the immediate interior for their common grades of lumber, and in the east for the lumber which will stand higher freight rates and for the shingles. They have also at their disposal the markets of Alaska, Hawaiian and Philippine Islands, and Mexico, beside the advantage of a large export trade. The advantage in the export

trade is increased by the facility with which vessels for that trade can be obtained at the United States ports on the Pacific coast. This is due to the made empty inbound tonnage, and the habit of vessel owners of sending their unchartered boats to ports where they are most likely to secure loads. Charters at the United States ports are obtainable at lower prices than at Vancouver or other Canadian ports.

WEIGHTS OF LUMBER

The railway company urged as an additional reason for the discrimination the difference in weights, cedar as compared with fir. In reply, spruce lumber was referred to as carried on the fir basis, and being no heavier than cedar per thousand feet. The difference in weight is not taken into consideration from the mountain mills. The minimum weight per car is 30,000 lbs. for spruce fir or cedar lumber. But a small quantity of cedar can be shipped on the kiln dried basis of weights, only the cedar known as clear, that is, cedar wholly free of knots, The kiln drying of common cedar would result in the knots falling out and rendering it worthless. Cedar seasoned, or partly seasoned, by the ordinary process, weighs very little less than fir per thousand feet.

WASTAGE

One who is acquainted with the economies practised by the lumber millers in the east is somewhat shocked on seeing the wastage resulting from the operations of the large mills upon the Coast. This wastage arises to some extent from a want of sympathy in the railway rates. In the process of the case it was urged that the value of the service to the shipper should be considered in making rates. This is another phase of "what the traffic will bear" basis of making rates, which seems to some extent to be disregarded by the Canadian Pacific Railway in making these east bound lumber rates. As the rates stand at present they are higher "than what the traffic will bear." The result is the curtailment of output and an unreasonable wastage.

MOVEMENT OF EMPTY CARS

The railway company made reference to the haul of empty cars for the traffic. To this the complainants replied that the west bound movement of empties would be related to the rates charged from both the mountains and coast mills under a relative system of rates. It was suggested that the establishment on the coast of flour mills might be encouraged by the railway, which would draw grain from Alberta, the surplus products of the mills being exported, the same as is now done by mills established at Tacoma and elsewhere on the United States side of the line. There seems to be an opening for this business on the Pacific Coast provided reasonable rates are made from Alberta. There is also an opportunity to work up an anthracite coal business from the mines at Banff and elsewhere, there being a demand for this coal at Vancouver in spite of the present high price. Again, if the Canadian Pacific Railway would establish a reasonable basis of rates upon Yukon traffic and lend its powerful assistance to our manufacturers and shippers in exploiting the Canadian Yukon market, it is more than possible that those supplies for the Canadian Yukon, which are now being shipped from United States points, might be diverted to the Canadian manufacturer and shipper. It cannot be that it is impossible for the Canadian Pacific Railway to create a west bound tonnage that would furnish cars for its east bound trade. It is the duty of the company to endeavor to do so.

FACTORS IN RATE MAKING

In the making of rates proportion is a factor. It is indicated above that the rate for all classes of lumber from the mountain mills to Winnipeg is 33 cents while from the coast for fir, spruce, etc., lumber the rate is 40 cents. It is not reasonable to find rates for longer mileages, unless under exceptional circumstances, showing the same earnings per ton per mile as rates for shorter distances, where the differences in mileages and the distances are both considerable. From Vancouver to Winnipeg the distance is 1,484 miles, while from Kamloops the distance is 1,233 miles. The Vancouver rate of 40 cents and the Kamloops rate of 33 cents stand in mathematical proportion, which results in the same ton-per-mile earnings from both points, while an examination of rates will show under the general principle of rate making that as mileage is increased the rate per ton per mile is decreased. The real difficulties of transportation, heavy grades, etc., are east of Kamloops, so that it might be expected the difference in rates would not exceed a proportional one. While taking into consideration the principle of decreasing rate per ton per mile with the increasing mileage, the coast lumber manufacturers expressed themselves as willing to accept upon cedar lumber the present established difference of 7 cents per 100 lbs. as applicable to fir lumber.

MILL PRODUCTS SEPARATED IN RATE MAKING

The practice of separating the product of the mill and charging upon one portion, one scale of rates and upon another portion, another scale of rates does not obtain in the east, where shingles and lumber are carried from all mills on the same rates. There does not seem to be any reason for the existence of this practice upon the Pacific Coast. It was urged that it should be disallowed and discontinued. In their own interest, it was argued that the Canadian Pacific Railway should not impose a discriminatory rate upon common cedar, which costs more to manufacture and sells for less than common fir, but should encourage the movement of this material into the Manitoba market to displace the product of the United States lumber mills, now being imported in large quantities.

BETTER EARNINGS ON U. S. LUMBER

In a letter written to the lumber manufacturers of the Coast, Mr. Peters, Assistant Freight Traffic Manager of the Western Lines of the Canadian Pacific Railway, stated that railway earned relatively more on the lumber arriving from the States, but added that this fact was not given any weight by the Canadian Pacific Railway in their relations with the lumber industry of British Columbia.

DUMPING

Over production in the United States has resulted in a large amount of dumping of lumber upon the Canadian market. This applies particularly to Manitoba. It is plain from the above remarks upon the condition of the lumber trade on the United States Pacific Coast, that it is possible for those manufacturers to dump lumber upon the Manitoba market, in view of the output and the conditions under which it is manufactured.

It is not necessary, however, that the dumping into Manitoba should be from Oregon and Washington. The result is the same if the United States Coast manufacturers dump into territory considered to be local to the lumber millers of Minnesota, who, if their lumber market be invaded by the coast millers, might be obliged to turn elsewhere, as they have been turning to Manitoba, to get rid of their surplus stocks.

INCONSISTENT RATE MAKING

In view of the absence of a consistent basis of making these east bound tariffs, a basis that recognizes the relative locations of various consuming points in Manitoba and the Northwest, it was suggested to the Commissioners that a committee composed of a representative of the Canadian Pacific Railway, the Chief Traffic Officer of the Railway Commission and a representative of the manufacturers should be given the responsibility of re-aligning these tariffs. To this suggestion the Commissioners gave their ready approval.

C. P. R. CHARTER

In concluding his case for the Canadian Pacific Railway, Mr. Davis, the Company's solicitor at Vancouver, took occasion to refer the Board to the charter of the Canadian Pacific Railway and to the Railway Act in effect prior to February 1st, and to

the Act of 1903 which took effect on February 1st, according to which the rates on the main line of the C. P. R., are to be free from Government control until that section of the road earns a dividend of 10 per cent. on the cost of construction. It was noticed recently in the newspapers that a set of questions has been prepared for the Supreme Court by the Honorable the Minister of Justice and the Railway Company with reference to the legal interpretation of this exemption.

DISCRIMINATION ON C. P. R.

A ruling had been already given out by the Hon. Mr. Blair upon the power of the Board with respect to discrimination on the Canadian Pacific Railway. He stated that there was no question but that the Board has the power to correct discriminations whereever they exist on the railways of Canada, except the Intercolonial Railway. Mr. Davis argued that the power of the Board was limited to stating that a discrimination existed and must cease, and that it does not include the privilege of stating the manner in which the discrimination should be done away with.

PROFESSOR S. J. McLEAN'S VIEWS

Professor McLean on this question of the control of the rates of the Canadian Pacific Railway expresses his opinion in the report of 1902, page 38, which reads as follows :

"The question which comes up in this connection is the assumed impossibility of regulating the rates of the Canadian Pacific Railway. While the general rates cannot be regulated until the dividend of 10 per cent. is obtained, in other words, never, there is no power conferred to charge unreasonable rates or to make preferences. In this respect this company will be subject to regulation."

If Professor McLean's view on this subject is correct, the Board will have the power to order the discrimination to cease and to express its views, and see that they are carried out, with respect to what would be reasonable rates.

JUDGMENT

The decision is not expected for a short time as the Commissioners have only arrived home from the Coast and have not had an opportunity of considering the various cases submitted to them at various places during their journey.

TRADE PUBLICATIONS

Pianos.—The Morris Piano Co., Ltd., of Listowel, have issued a handsome descriptive catalogue of their different styles of upright pianos. The illustrations are splendid samples of two-color work and are executed on the finest kind of coated stock. A novel effect is obtained by having a folded fly-leaf attached to each page, on which is printed all the descriptive matter. The company will be pleased to forward a copy to anyone on application.

Power.—"The Shawinigan Water and Power Co., its Property and Plant" is the name of a handsome little book placed by that firm in the hands of every delegate at the Montreal Convention. It is an exceedingly interesting publication and one that will be much prized by every one fortunate enough to receive a copy. It contains a full account of the Company's charter, its water power development, buildings, power plant, electrical plant and transmission lines, in fact just such information as the prospective consumer of electric power would wish to obtain. A detailed description is also given of the various industries supplied with power from their central power house. Thirty-two pages of beautiful half tones, besides a number of maps, afford ample evidence of the substantial character of the work which has already been accomplished at this busy little place, and suggest the immense possibilities of Shawinigan Falls as an industrial centre.

Printing.—"How to Mark Printers' Proof" is the title of a useful little booklet now being sent out by the Atwell Fleming Printing Co., of Toronto. It is gotten up for the benefit of those who have occasion to deal with printers but who are unfamiliar with their marks. All the usual signs and abbreviations are shown and explained, and a sample proof, after having been marked by the proof reader, is reproduced. The booklet presents a very attractive appearance. It is printed in three colors on Kenmore book paper, and is bound in a substantial cover of dark gray, on which is embossed in red the firm's monogram.

Tables.—The Strathroy Furniture Co., Limited, have recently contributed to our library file a copy of their No. 5 Catalogue. It illustrates a great many varieties of their extension and library tables, made from plain and quartered oak and elm. Unique designs of parlor and card tables are also shown, besides combination tables and cabinets for kitchen use. By specializing on tables this firm has been able to produce a very superior article, and is reported to be doing a large export business. They advertise that figures will be gladly quoted on any special designs not shown in their catalogue.

The Dodge Calculator.—The Dodge Manufacturing Co., Toronto, have just received a new issue of their handy novelty known as the "Dodge Calculator." With this device one can determine the required diameter of a driven pulley to produce a given speed, the speed of driving shaft and diameter of driving pulley being known, or if the speed and diameter of a driven pulley be known the device will indicate what the speed of a driving shaft would be using a stated size driving pulley, or for a given speed on the driving shaft it will indicate what the diameter of driving pulley must be. As this is the fourth issue, it would seem to indicate that it is being much appreciated by mechanics, millwrights and engineers. A copy will be mailed free for the asking.

Wall Paper.—Colin McArthur Co., of Montreal, are always well to the fore with original and attractive advertising novelties. The latest production is a folder containing a short object lesson on the Look-Out Man, in the course of which they draw a number of interesting comparisons between the watchful sailor, keen of eye and alert, and their competent wall paper men constantly on the look-out in order that the Line may float out on the currents of popular opinion to the flood tide of commercial success for both the manufacturer and the dealer. The Psychology of Advertising has evidently been carefully studied by these people, and their efforts are deserving of every success.

Wheels.—In the preface to a handy little booklet setting forth the many advantages of iron wheels for farm and road use, the Dominion Wrought Iron Wheel Co. of Orillia, have introduced with good effect some extracts from the Annual Report of A. W. Campbell, Commissioner of Highways for Ontario. Mr. Campbell is a strong advocate of broad tires. They not only lighten the burden for the horses, but actually improve the roads by rolling them down hard. For farm and general work the low wide-tire iron wheel is shown to be much superior to the ordinary wooden variety. The writers have succeeded in making out a strong case for their special line of wheels, and with a wide circulation among farmers this booklet should prove a profitable advertisement.

TRAFFIC FOR ARGENTINA

Canadian exporters who are likely to be doing business with Argentina will be interested to know that the Manchester Liners Limited, have an excellent service of steamers from Manchester to the River Plate, which, in conjunction with their regular service from Montreal to Manchester, affords the best possible means for shippers to reach Monte Video, Buenos Ayres, Rosario and other River Plate ports. Where goods have to be trans-shipped it is always preferable, if possible, to use the same line of steamers, as the goods receive less handling and the charges are reduced to a minimum. There are no less than ten steamers engaged in these joint services, so that shippers are assured of quick despatch. The Canadian representative of this line is Mr. R. D. Harling, Toronto.

Labor Column

ORGANIZED LABOR OVERREACHES ITSELF

A Case Where Extravagant Demands Lead to the Complete Undoing of a Labor Union

AN instance has recently been brought to light where the extravagant demands of organized labor resulted not only in severe individual hardship, but in the complete disruption of the local Union. The facts of the case, which are now published for the first time, were gathered from the employer only with the greatest difficulty, for nearly all the strikers are again back at work, and he was naturally very reluctant to say anything which might tend to strain the harmonious relations now prevailing.

Generous Treatment Not Appreciated

In the factory in question between forty and fifty skilled workmen were kept busily employed all the year round. Many of these had been with the company ever since its organization, some twenty years ago, and were receiving a wage that compared very favorably with the rate of wage paid to skilled operators in other callings. In the spring of 1903 an increase of 5 per cent. was voluntarily granted by the company. Six weeks later a further increase of 5 per cent. was put into effect, followed in two months by a reduction of the hours of labor from 60 to 55 per week, without any corresponding reduction in the week's wages. A year previously the company generously decided to grant a bonus to each employee in proportion to the length of time he had been on the pay-roll and in some instances the amount thus paid ran considerably over $100.

One would naturally expect treatment of this sort to meet with some appreciation, but subsequent developments proved that it had only been wasted upon men who were utter strangers to any feeling of gratitude. In June, 1903, the proprietors were waited upon by a committee from the Union, who demanded (1) a further increase in wages of 10 per cent., with time and a half for Saturday afternoons and overtime; (2) recognition of the Union; (3) an agreement regarding the government of apprentices; (4) recognition of the Shop Committee; and (5) the use of the Union Label upon every article manufactured. These demands were made one morning shortly after the commencement of work, and because they were not instantly acceded to a strike was declared. By ten o'clock every employee about the place had left his post and was out on the street hurriedly changing his clothes.

The trouble lasted but three weeks. The expected strike pay was not forthcoming because the strike had been declared without a permit and without consulting the international authorities. Work at their calling was exceedingly difficult to obtain, as the business was practically the only one of its kind in the locality. A vigorous boycott against the product of the factory was instituted, a boycott which virtually stopped the sale of goods made the previous winter when the works were kept in operation for no other reason than to provide the men with employment.

The employers, who had steadily refused to recognize the Union in any way whatever, were waited upon at the end of the period mentioned by a committee of the employees, not of the Union, and an agreement was reached whereby an increase of 5 per cent. in wages was granted, all other demands being dropped.

The Employers Defied

But after the resumption of work it was not long before trouble broke out afresh. Frustrated in their first attempts to secure recognition of the Union and control of the shop, the men determined to accomplish their purposes by other means. A committee of the Union was secretly appointed whose duty it was to enforce shop discipline. It was mutually understood that every man should do just so much work in a day, and no more. If he exceeded the amount fixed upon he was fined, and if at any time he were observed to be working more quickly than seemed due and proper, he was fined again. Personal suggestion or supervision on the part of the employers was met with open defiance. If one of the firm entered the shop during factory hours, the men would stand stolidly by with their arms folded, refusing to work until he had left. New men taken on by the foreman were threatened, coerced and driven out of town, in many cases their fares being paid by the Union, whose sole object was so to reduce the supply of labor as to place themselves in a position to enforce their demands.

Shut Down Leads to Litigation

Matters drifted along in this way from bad to worse until finally a stage was reached where an open rupture could no longer be avoided. And just at this point a fortunate combination of circumstances occurred to place the key to the situation in the hands of the employers. The slack season of the year had arrived when sales were light and stocks very heavy. Sound business policy demanded that these should be reduced before tying up any more capital, and so a cessation of operations was decided upon. Then followed the snow blockades of last winter with their interruption of traffic and practical annihilation of business. This meant a further delay before work could be resumed. Subsequently the company decided to take advantage of the shut-down to remodel their plant and provide for the introduction of the gang system of piece work, and before this was completed three months had passed by.

By the employees this action was regarded as a lock-out pure and simple, and application was consequently made to the American Federation of Labor for lock-out pay. The latter requested an explanation, and it was brought out that the facts were as outlined above. It was at once recognized by the Federation that the shut-down was justified on good business grounds. They therefore refused to allow the application for lock-out pay, throwing upon the local union the onus of fighting their own battle.

The first act of retaliation on the part of some of the employees was to lay an information against the company, charging them with breach of the Alien Labor Law. It appears that after the strike of June, 1903, with the consent of the other employees, the promise of steady work had been given to three new men on the understanding that they would not join the Union. Subsequently these men did join the Union thus violating their agreement. When the shut-down took place they were told to report for work at the company's branch factory a few blocks away, but refused to work there, thus breaking faith a second time. On the evidence of these men, who were themselves the aliens referred to in the charge, two out of three of the charges under the Alien Labor Law were proven and the minimum fine imposed. These same men then instituted a suit for damages against the company for non-employment and breach of contract. The case was fought through the courts for several months and at great expense to both sides, finally resulting in a victory for the company.

Meanwhile a most hostile attitude was adopted towards the firm by the employees generally. They attempted to boycott their goods, threatened their buildings with destruction by fire, and evidence is not wanting to show that some were even prepared to go to the extent of sacrificing human life. The property had to be guarded both day and night by watchmen; one of the members

of the firm, passing to and from the office, found it expedient to change his route daily in order to circumvent plots aimed at his person, and every night for three consecutive weeks he was virtually kept a prisoner in his own home by men who would scruple at nothing to accomplish their own nefarious purposes.

Death Blow to the Union

But three months of idleness in the midst of a long hard winter have a wonderfully educative influence on men who, in their hour of prosperity, are not disposed to listen to reason. Those who had allowed themselves to be coerced, who had acted contrary to their own good judgment in following the tactics of their leaders, were the first to become disgusted. Work, they found, was impossible to obtain, and with wives and children at home to be provided for they found little satisfaction in fighting for an empty principle. One by one they left the Union and requested to be taken back on the company's own terms. By the time the alterations to the factory were completed and work was ready to be resumed scarcely a man could be found who would own allegiance to the Union. It had become thoroughly disorganized, its leaders had become discredited, and its name had become a name of reproach and contempt.

The plant is now running with its full quota of men. There is no question of an open shop or a Union shop, for the word Union never enters into any of their discussions. The best of harmony prevails between employer and employee, and financially the men are as well off as they were before the trouble began. But they have learned their lesson, and learned it well, and others who are prone to follow in their footsteps would do well to profit by their unfortunate experience.

THE ASSOCIATION LIBRARY

In addition to the Departmental reports regularly received by the Association from the Dominion Government, a copy has been sent us of the correspondence respecting the Alaska Boundary and the Award of the Alaska Boundary Tribunal; also a copy of the Minutes of Evidence before the Royal Commission on Industrial Disputes in the Province of British Columbia. The latter is a book of over 850 pages, and throws a great deal of light on questions affecting capital and labor in Western Canada.

Like its predecessors, the Statistical Year Book of Canada for 1903 contains a vast store of information that every public spirited man in this country will find both interesting and valuable. All the regular departments have been maintained, and much new data, rendered available by the census of 1901, has been incorporated. The industrial progress which the country has made in the past ten years is forcibly told by means of figures. The growth along the lines of education is especially noteworthy, a most remarkable reduction having taken place in the number of illiterates. It would be difficult to over-estimate the usefulness of this annual publication. Almost every phase of our national existence has its year's story told in figures, which are made instantly accessible by means of a carefully prepared index.

Mr. Everett U. Crosby, joint editor with Mr. Henry A. Fiske of the Hand-Book of Fire Protection for Improved Risks, has kindly placed upon our shelves a complimentary copy of the latest revised edition of their valuable work. This book, which is at once a text for the novice as well as for the experienced risk inspector, specifies and explains the best practices followed in affording protection against loss by fire. It should prove of great assistance to architects and property owners interested in minimizing the chances of loss from this cause.

The Association is indebted to Messrs. Marion & Marion, Patent Solicitors of Montreal, for a copy of their recent publication, entitled the Inventor's Adviser. This valuable little book discusses in an interesting manner the reason for patent monopoly, the possibility of secret use of an invention, the nature and policy of patents, the time required to procure patents, and the course and treatment of an application in the Patent Office. A summary of the law and practice relating to patent matters is given, following which are a large number of court decisions relating to patent laws in Canada, the United States and other countries. The book is issued to answer questions of frequent occurrence relating to patents and inventions, and should be of great service to manufacturers and inventors generally.

Chicago Conference for Good City Government, Clinton Rogers Woodruff, Editor, National Municipal League, 1904.— This volume of over 400 pages contains the proceedings of the Chicago Conference for good city government and the Tenth Annual Meeting of the National Municipal League. The League, in placing this information before the public, expresses the desire "that it may prove to be useful and helpful to that growing number of Americans who appreciate the duty and necessity of giving of their time and energy for the elevation of American municipalities, and for combating the forces which are always tending to corrupt and debase them." The word American is here used in its proper and larger sense and the valuable papers on municipal matters are as worthy of study by Canadians as by the citizens of the United States. No less than twenty-five different articles are published, and each is by a recognized authority in some sphere of municipal work. The subjects dealt with are:— Partizanship in Municipal Politics, The Progress of Home Rule in Cities, Uniform Municipal Accounting, Program for the Teaching of Municipal Government and of Civics in the Elementary School, Municipal Taxation, The Functions of the Municipality with special reference to Public Service and a number of others. The volume should be in the hands of every student of municipal affairs.

MADE A MISTAKE.

Should Have Bought Canadian Scale and Saved Trouble and Delay

Trouble has been brewing for some time between the Point Edward Elevator Co. and their Minneapolis contractors over the breaking down of a big grain scale in the top of the new elevator. The scale, imported from the United States, had been built and erected throughout in accordance with the manufacturer's specifications, and at no time while it was in use was it loaded to anything like its full capacity. The accident, which occurred in May last, resulted in the scale breaking and dropping down through five floors and landing at the bottom of the building.

For a time there was a fear that litigation would have to be resorted to before the matter could be settled, but it is now announced that both the Minneapolis contractors and the United States manufacturer have agreed to make good all damage and replace the scale without cost to the Company.

The elevator manager, when spoken to on the subject, expressed his regret that he had not insisted upon a Canadian-made scale in the first place, as his experience of Canadian-made elevator scales had been most satisfactory. The large scales in the Sarnia Elevator, which is under the same manager, were made in Canada.

GENERAL OFFICE ASSISTANT WANTED

One of the largest manufacturing concerns in Canada requires the services of a man capable of filling a position as general office assistant. He must be of good address, irreproachable habits, upright, indefatigable, adaptable and experienced; a married man 30 to 35 years old preferred. A good salary will be paid to start with, and promotion will follow as resulting services justify. For further information address The Secretary, Canadian Manufacturers' Association, Toronto.

Industrial Activities OF THE MONTH

Contributions of interesting news items are invited

THE MANUFACTURERS OF CANADA

There are few manufacturers in Canada that are more widely known or more closely identified with our national industrialism than Mr. Robert Munro, the Managing Director of the Canada Paint Co., Ltd.



NO 6.—ROBERT MUNRO

He was born of Highland Scottish parents, July 22nd, 1841, at Glasgow, Scotland, and is a first cousin of Neil Munro, the Scottish author. Soon after his birth his family returned to their native highlands, where Mr. Munro spent his boyhood days. It is sometimes said he showed his powers of application and his facility of expression early in life by acquiring a familiarity with the Gaelic language, but if that be not a sufficient tribute to his youthful endeavors, he can supplement it with a number of books he has in his library, prizes won at school from 1849 to 1853. In this latter year his family returned to Glasgow in the interest of their six boys. Robert entered Wellington Place Academy preparatory to entering the University with a view to a profession upon which his parents had set their hearts. He could not, however, resist the temptation of a business offer and in 1857 he entered the service of Alexander Fergusson & Co., Ltd., of Glasgow, manufacturers of leads, paints and colors, a connection which has never been severed although he is now the only survivor of the members of that firm as it was constituted in January, 1876, when he became a partner.

This firm had business interests in Canada and Mr. Munro's first visit to this country was in November, 1865. In 1876, the importing business being impeded by the Canadian Tariff, works were established in Montreal under the control of the Canadian agents. In 1887 the Canadian business was again acquired by the Glasgow firm, and in 1891 this was merged into a new concern, the Canada Paint Co., Ltd., with Mr. Munro as Managing Director.

Mr. Munro has unselfishly refused to confine his energies to personal improvement, giving freely of his energy and talent to public movements. In 1901-2 he was the President of the Canadian Manufacturers' Association, the first President from the City of Montreal. He has been a member of the Council of the Montreal Board of Trade, was Treasurer when the present Board of Trade Building was in course of erection, and is at present 2nd Vice-President. He is also President of the Montreal Young Men's Christian Association, an elder in the Crescent St. Presbyterian Church, Superintendent of the Sabbath School and a member of the Board of Management of the Presbyterian Theological College.

His influence in any sphere is for good. His faith in the uture of his adopted country is firm. He is one of those men who, while they refuse the proffers of public positions, exert a wholesome and positive influence upon the public mind. Many a young man has felt the benefit of his personal exhortation ; many an audience has been impressed with his optimism, earnestness and sincerity.

THE Locomotive and Machine Co., of Montreal, has just completed extensive additions to its plant amounting to abou $500,000, both in the Locomotive and Structural Steel Departments, making the plant one of the best and most complete on the continent. The company is also spending $100,000 in building a hotel and cottages to accommodate its employees at Long Point, where the works are located. A large number of important contracts are now under way, and a staff of about 1,600 men are kept busily employed.

The attention of manufacturers is directed to Mr. Arthur White's advertisement on page 115. Mr. White will be remembered as the popular Division Freight Agent of the Grand Trunk Railway in Toronto for many years. We wish Mr. White success in his new field. He will be glad to get in communication with manufacturers desirous of writing fire insurance.

The Penberthy Injector Co., of Windsor, are making preparations to commence the manufacture of globe, angle and check valves. They expect to be in the market with P.I.C. valves early in 1905.

The Victoria Shoe Co., Toronto, who had a most interesting process exhibit at the Toronto Fair, are equipping their factory with a number of new machines similar to those shown. They will be the first in Canada to make use of the "Wonderhook" for ladies' boots.

The Jackson Manufacturing Co., Clinton, Ont., have just completed the installation of a new engine and boiler, and an electric plant to run their machines and light their factory.

The Sanderson-Harold Co., or Paris, Ont., have added another story, 40 ft. by 120 ft. to their construction department. They have also enlarged their dry kiln and machine shop. New machinery has been installed, which will give them double their former capacity.

Work on the new waterworks and sewage system for the town of Oshawa was begun early in September, and it is expected that everything will be completed by next spring. The estimated cost is $150,000. The water will be taken from Lake Ontario.

A branch of the Carter White Lead factory of Chicago, has been started at Montreal, the old C .P. R. shops on Delorimier Avenue having been secured for that purpose. The lead to be corroded here will be brought by the company from its mines in British Columbia.

The Eureka Planter Co., Ltd., Windsor, Ont., have added a wood-working department to their already well-equipped plant. They have installed a modern planer and matcher, as well as rip and cut-off saws. The new equipment will be used in the manufacture of their combination hay and stock rack.

The large mica mine situated near Cantley, Ont., has been sold by the owner, Mr. J. D. King, Toronto, to the Westinghouse Co., of Pittsburg, Pa. The company announce their intention of operating the mine on an extensive scale.

The immense coal-washing plant of the Dominion Iron and Steel Co., at Sydney, C.B., is now completed, and is said to be one of the finest in existence. It is built in two units, there being two distinct sets of machinery and appliances which can be operated singly or together. The capacity of both plants is 2,500 tons a day. The buildings are of structural steel and brick on concrete foundations.

The Ford Motor Co., of Canada, Ltd., capitalized at $125,0 0, have commenced the manufacture of automobiles at Walkerville, Ont. About sixty hands will be employed throughout the winter. Machines for the Canadian trade will be ready for the market early next year.

Cushing Bros. Lumber Co., have greatly enlarged their factory at Calgary. They now employ about 100 men, and supply nearly all the manufactured articles used by the building trade in Alberta.

The Dominion Government will make an attempt to rid the coastal waters of the Maritime Provinces of the dogfish pest. Three reduction plants are to be established for converting the fish into fertilizer and glue. One will be erected in Northern New Brunswick, one in Cape Breton, and one on the M agdalen Islands They will be operated by the Government, who will pay the fisher men a good price for all the fish they bring in.

Extensive improvements and additions are in progress at the works of Rhodes, Curry & Co., Amherst, N.S. A new moulder is being installed, and separate buildings are being erected for office and storage purposes.

The Library Bureau of Canada, Ottawa, are adding an extra story to their old main building, and are erecting a new three-story addition as well. They have also begun work on a lumber storage shed for kiln ri ed lumber which will have a capacity of twenty-five car loads.

The new plant of the Cornwall Paper Manufacturing Company is now almost completed. It is a one-story building, built solidly throughout of stone, and its appliances are of the most modern design. The paper-making machine will be run by steam, but all the rest of the machinery will be driven by electric power. The capacity of the mill is 15 tons per day, and only the finer grades of paper will be made.

The Provincial Fertilizer Company's establishment, situated on St. Peter's Island, near St. John, N.B., is now in operation. The material it makes use of is dog fish and fish offal, and its capacity is said to be very large. At present only 15 men are employed, but this number will shortly be increased.

Work is being pushed steadily along on the plant of the Belleville Portland Cement Co. Powerful engines, possessing a combined capacity of 1,550 h.p., are being installed, and when completed the works will be the most modern to be found anywhere on the continent. It is expected that the daily output will be about 2,000 bbls.

The Dominion Tar and Chemical Co., of Sydney, Cape Breton, have under consideration the erection of an extensive plant for creosoting timber. Louisburg is spoken of as the probable site, though details are not yet completed. No such industry has yet been established in Canada.

The Singer Sewing Machine Co's new plant at St. John, N.B., will consist in all of twenty-eight buildings and will cover an area of 37 acres. The total cost of the buildings will exceed $1,000,000. The contract for the structural iron has been let to the Dominion Bridge Co., Lachine, for $250,000.

The Kerr Engine Co., Ltd., of Walkerville, Ont., have recently established agencies in Winnipeg. Mr. E. H. Bissett, 339 Main St., has charge of the waterworks hydrants and valves, and Mr. David Philip, 470 Main St., of the brass and iron steam and water valves, radiator valves, etc.

A box factory with a capacity of 6,000 boxes per day has just been put in operation at New Westminster, B.C., by the Brunette Saw Mills, Limited. The company are said to do a very large business in supplying boxes to the fish canners and fruit and butter packers.

The Brackman-Ker Milling Co. will erect a large steel tank for storage purposes at Strathcona, Alta., next spring. Work was to have been commenced this fall, but had to be postponed owing to their inability to secure the steel.

The Penman Manufacturing Co., of Paris, Ont.. is said to be about to establish a branch in the West. Medicine Hat is spoken of as the probable location of their new industry.

The Henderson Roller Bearing Co , of Toronto, will establish a branch of their big business at Winnipeg. They will employ between 100 and 200 skilled mechanics.

Application has been made for a charter incorporating the Canada Coating Mills Company, Ltd. The capital stock is placed at $100,000, and the chief place of business will be Georgetown, Ont , where work has already been begun on the erection of a large factory. The company will manufacture all kinds of coated paper, cardboard and boxboard covers. John R. Barber, M.P.P., is one of the leading spirits.

The Macfarlane Shoe Co., Montreal, have removed their plant to 90-96 Beaudry Street, where they have almost double their former capacity. Their output now amounts to 1,500 pairs of shoes a day.

The Carriage and Wagon makers of New Brunswick have organized an association for the purpose of maintaining a uniform scale of prices. The President of the Association is Mr. B. L. Moore, of Moore's Mills, N.B.

The London Brass Works Co., Ltd., are adding a three story warehouse to their present premises at a cost of about $5,000.

The Packard Electric Co., Ltd., of St. Catharines, are at work upon a new automobile plant in that city, which they expect to have in operation by the first of the year. It will be given a fixed assessment by the municipality, in return for which they agree to employ a minimum of fifty hands, and pay $25,000 annually in wages.

The premises of the Dominion Linseed Oil Co., Ltd., Montreal, are being completely remodelled in order to provide for a much larger output.

The plant of the Sheridan Manufacturing Co., Ltd., has been absorbed by the Pease Foundry Co., Ltd., who will continue the operation of the works at New Toronto. The management will be practically the same as it was before the amalgamation.

The display of the Metropolitan Soap Co. at the Toronto Fair was a distinct revelation to many of the progress which the textile soap industry has made in this country. This enterprising company has recently extended its factory facilities very considerably, and its brands are becoming well known to the Canadian trade.

The London Bolt and Hinge Works have built a large addition to their factory and are installing eleven new machines of the latest design.

Messrs. Fleming and Ferguson of Glasgow, Scotland, have been awarded the contract for the ice-breaker which is to ply on the lower St. Lawrence during the coming winter. The vessel is to be delivered on the Clyde on November 20th. She will be 200 ft. long, 43 ft. beam, with a draft of 18 ft. An attempt will be made to maintain communication by water with the port of Montreal throughout the winter season.

AGENCIES WANTED

Young man starting up as Manufacturers' Agent would like a couple more good lines suitable for western trade. References if necessary. F. E. Henderson, 482 McDermott Ave., Winnipeg.

Foreign Trade News

INDUSTRIAL MEXICO AND ITS TRADE OPPORTUNITIES

IN his last report to the Foreign Office, Mr. Consul Leay of Vera Cruz has some interesting things to say about the manufacturing industries of Mexico and the general conditions of trade there prevailing.

The spinning and weaving of cotton is an industry that for years has been protected by a high tariff, and local manufacturers are now said to be in complete possession of the home market. The total annual consumption of cotton is about 120,000 bales, of which one-half is of native growth. The principal mills are in the hands of French and Swiss capitalists. They are fitted with the most modern machinery and driven by electricity derived from water power. Almost every variety of cotton is manufactured, including standard grades of percales, ginghams, shirtings and towellings. Many of these lines are equal to the best goods from England or the United States, a matter upon which the Mexicans are to be congratulated.

Of sugar mills there are over 1,200 in Mexico, one-quarter of which may be regarded as really important producers. The industry, therefore, is one of considerable consequence. The mills are equipped with British or United States machinery and their number is gradually increasing. In 1902 the total production was 103,000 tons; in 1903, 112,000 tons. The crop for the present year is estimated at 126,000 tons.

The tobacco industry has also attained a considerable degree of prominence. There are now nearly 750 factories in operation, which last year turned out about 140,000,000 cigars and 6,112 tons of cigarettes. The total value of tobacco produced in the country is in the neighborhood of $4,000,000, of which $850,000 is exported.

Consul Leay is of the opinion that the present consumption of British goods in Mexico is but a small percentage of the trade which might be done were but the field invaded more systematically, and a little more push and energy shown in securing a fair share of the market. The demand for the better classes of goods is steadily increasing; the country is every year becoming more and more prosperous and the imports of foreign manufactures may reasonably be expected to grow in proportion.

There is said to be a good opening at present for all kinds of roofing material. Even the best houses often have leaky roofs, for the locally manufactured tiles are unable to withstand the heat and moisture. United States tools have achieved an extraordinary degree of popularity owing to their lightness and ingenuity of construction. Cork linoleums and thick floor coverings should find a ready sale, as the floors throughout Mexico, even in the best provincial houses, are of cold stone. Stoves that may be left burning without attention and that will not overheat the room, should also meet with considerable favor. Every householder paying a rent of $300 a year really needs two or three of these and could easily afford them. The increased attention being paid to mining has more than doubled the demand for mining and reduction machinery within the past three years. For other lines of machinery there are also good openings. Improved agricultural implements are slowly being introduced throughout the country, but there still remains much to be done in this respect as about four-fifths of the implements and vehicles now in use are of the most antiquated design. The flour to be obtained in Mexico is not graded, and the better qualities do not seem to be procurable at all, with the result that all bread is more or less bad.

A word of warning is given to those who would speculate in Mexican rubber plantations. It is estimated that up to the present time nearly $5,000,000 has been invested and lost in this hazardous undertaking, a great part of which was obtained, and continues to be obtained, by fraudulent advertising.

THE COMMERCIAL DEPRESSION IN BRAZIL

Consular reports received from Brazil do not indicate any improvement in the trade conditions of that country. For years business has been practically at a standstill owing to the low price of coffee, the growing of which constitutes the chief industry of the country. Money is reported as being exceedingly scarce and loans are obtainable only by houses of the highest standing. The average rate of discount is 10 per cent. The situation, however, is somewhat relieved by the general belief that bottom has at last been reached, and an undercurrent of confidence is beginning to prevail in certain quarters.

The crops for 1903 were for the most part fairly good, coffee doing exceptionally well. The yield was large and the quality excellent, better in fact than it has been for years. A large surplus of coffee carried over from the previous year was also disposed of at strong prices, and shipments last autumn were very heavy.

The returns from cocoa and tobacco were, contrary to expectations, much less than in 1902 owing to the unseasonable weather during flowering time. The former is now being cultivated far more extensively than in past years, and if the conditions remain favorable a much larger yield may confidently be looked for.

The rubber trade has been greatly stimulated through the discovery in the interior of the state of vast forests of Manicoba, the existence of which was never before suspected. These have been found to produce a grade of rubber far superior to anything heretofore seen in that country. Shipments up to the present have been very light, partially on account of the scarcity of laborers to collect the rubber, and partially by reason of the very poor roads with which this new country is provided. As soon as better means of communication with the interior are established it is expected that a large and profitable trade in this product can be built up.

FOREIGN COMMERCE OF RUSSIA

In 1903 the total imports into Russia by way of the European frontier were valued at $300,000,000, an increase over 1902 of $36,000,000. The principal increase is to be credited to agricultural implements, due to the fact that the crop of 1902 was a very plentiful one.

The countries from which Russia buys most largely are Germany, $118,000,000; Great Britain, $51,000,000; and the United States, $17,000,000, with France, Austria and Finland following close behind.

Russian exports across the European frontier were valued in 1903 at $475,000,000, or nearly $62,000,000 more than they were in 1902. More than half of this amount is represented by the export of grains and farm products, as follows: wheat, $109,000,000; butter, $15,800,000; eggs, $25,500,000.

Russia's best customers are shown by the accompanying figures, taken from the export trade returns for 1903: Germany, $116,300,000; Great Britain, $109,000,000; Netherlands, $50,500,000; France, $37,950,000; Italy, $28,900,000; Finland, $23,400,000; Belgium, $21,800,000, and Austria-Hungary, $18,500,000.

Her sales to the United States were comparatively small, reaching in value only $2,700,000.

GROWING TRADE OF ARGENTINA

The foreign commerce returns of the Argentine Republic for the first three months of 1904 show imports valued at $43,300,622, as compared with $33,539,498 in the corresponding period of the preceding year, and exports valued at $73,234,446 as compared with $69,351,190 in the first quarter of 1903. Of the total imports $16,064,433 came from the United Kingdom. Germany, Britain's most formidable rival, did only about one-third as much business, with Italy, United States and France following her in the order mentioned. Of Argentina's exports France took $11,000,000, and Britain and Germany each about $9,500,000. An analysis of the articles exported reveals the fact that practically all the business is done in pastoral or agricultural products, $72,000,000 out of the $73,000,000 of exports falling in these two classes.

The classification of her principal imports is as follows :

Foodstuffs	$ 3,334,104
Tobacco	1,022,858
Wines	1,764,691
Textile Materials	17,575,958
Oils	1,415,469
Chemicals and Drugs	1,283,775
Lumber and Appliances	2,447,788
Paper and Appliances	904,620
Iron and Appliances	7,442,043
Glass and Ceramics	3,137,826

Britain's trade with the Argentine Republic seems to be steadily advancing, especially in the matter of wheat, and the decline which has been noticed in her receipts of wheat and flour from the United States is being made up largely from this source. The fertile fields and small population of this country make her a factor of great importance in the grain market of the world.

CHICAGO CONSUL AS COMMERCIAL AGENT

Canadians who are interested in Chicago as a market for exports will be pleased to learn of the kind offer recently made by British Consul Finn of that place. In a letter to the Department of Trade and Commerce at Ottawa, Consul Finn says:

"I take this opportunity to point out to you that this Consulate is always ready to do anything in its power to assist the commerce of any part of the British Empire, but that we are given little information from Canada, and Canadians never ask any information from us, while we are flooded with enquiries from United States firms willing to send goods into Canada. I would suggest that you regard this Consulate as one of your agencies, and make all possible use of my staff and of their knowledge of the trade and capabilities of this Consular district, and recommend Canadian merchants, manufacturers and others to call upon us when visiting Chicago, so that we may be kept in touch."

Possessing, as he does, a wide knowledge of the trade requirements of his district, Consul Finn's assistance and advice will doubtless prove of great value to Canadian manufacturers seeking to do business in that quarter, and to all such his generous invitation will prove very acceptable.

FOREIGN TRADE OF GERMANY

Germany's foreign trade for the first six months of 1904 showed imports of $795,000,000, an increase of $25,750,000 over the corresponding period of 1903; and exports of $627,000,000, an increase of $21,250,000. The great increase in imports was in cotton, $12,000,000, and grain, $5,000,000. Machinery and implements lead in the increases of exports with $5,750,000; cotton goods, $5,500,000 ; grain, $3,730,000 ; and wool and woolen goods, $3,000,000. The iron exports of the Empire dropped $3,000,000.

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

75 **Agencies—Antwerp**—A correspondent in Antwerp who has been in a general business for the last 21 years is starting an import and export agency and desires to make Canadian connections.

76 **Melbourne**—A long established firm holding a prominent position in the mercantile world in Australia, with offices in Melbourne, Sydney, Adelaide, Brisbane and Newcastle, have written at some length offering their services to Canadian manufacturers wishing to sell their goods in Australia. A well-known correspondent of the Association speaks of this firm in the very highest terms. The trade in general is discussed and particular items are mentioned as follows: Wall paper, news, book and writing paper, hardware of all kinds, oilcloth, furniture, lumber, enamelled ware, etc. If Canadian manufacturers do not wish to appoint a representative this firm would be glad to receive catalogues with prices and discounts, as they also do a large indenting business.

77 **Mexico**—A correspondent writing from Chicago desires to secure the agency of Canadian goods for the Mexican market. He states that he speaks and writes the language and is thoroughly acquainted in every way with the markets. He at present holds the position of export manager and Spanish correspondent in one of the largest wholesale exporting houses in the United States. As some of the articles he is anxious to secure the agency for he mentions paper, printing and fancy, paints and oils, machinery, hardware, groceries, tin stuffs, furniture, crockery, stoves, lamps and fancy goods. He claims a personal acquaintance with 200 of the largest importers in Mexico and knows their financial position.

78 **South Africa**—A manufacturers' agent in Port Elizabeth solicits consignments of all kinds of Canadian produce for sale on commission.

79 **Beans**—A **Hamburg** firm has asked to be placed in communication with Canadian shippers of beans for European markets.

80 **Billets**—A firm in **London, England,** write that they are at present prepared to buy from 5 to 10 thousand ton of steel billets and would like to have quotations for same.

81 **Boots and Shoes**—An important firm of wholesale boot and shoe dealers in **Christchurch, New Zealand,** desires, owing to the preferential tariff, to secure from Canadian manufacturers a line of ladies' medium class stock, prices ranging from $1 to $2, and men's goods ranging from $1.50 to $2.25. Information is also to hand regarding the styles and widths. Payment for these goods will be made in New York.

82 **Boots and Shoes and Leathers**—A correspondent in **Capetown, South Africa,** who has had a life long experience in the above trades and over ten years' experience in South Africa desires to represent Canadian manufacturers.

83 **Brushes, Combs, General Groceries, Etc.**—A firm in **Devon** doing a large wholesale trade ask to be placed in communication with a Canadian house manufacturing brushes, combs, pens, pencils and general groceries.

84 **Butter**—Enquiry is made by a **Bristol** correspondent for the names of Canadian manufacturers of high class butter with 1¼% salt for printing and rolling purposes who desire to be represented in England on a commission basis.

85 **Casein and Graphite**—A wholesale and retail **Liverpool** merchant and importer desires to sell the above on a commission basis. Sales can be made from 5 to 10 ton lots at a time. References are forwarded.

86 **Cases (Packing)**—A **Cardiff** firm asks to be placed in communication with exporters of cases from Canada complete with cardboard packings.

87 **Discs (Wooden)**—A **Swansea** correspondent has asked to be placed in touch with manufacturers in Canada of wooden discs for placing on top of corks of mineral water and other bottles.

88 **Dowels (Maple)**—A **London** firm desires to hear from a few reliable manufacturers in Canada of pure maple dowels rounded and smooth, 32″, 34″ and 36″ long, and 7/16 to 14/16 diameter.

89 **Flour, Rolled Oats, Peas and Provisions**—A correspondent in **Christiania, Norway,** desires to secure the agency of a Canadian shipper of the above lines. He is able to handle any articles belonging to the grocery and cattle feed lines.

90 **Furniture**—A gentleman at present in Ottawa desires to communicate with Canadian manufacturers regarding the furniture business in **South Africa.**

91 **Hardware**—A hardware manufacturers' agent with offices and show rooms in **London, Manchester and Glasgow,** desires to secure the agencies of Canadian shippers. He already represents in Great Britain and Ireland several United States firms. He represents these houses by practically opening for them a London office and doing business for them as if done direct from their own factory.

92 **Hardware, Cotton Goods, Underwear, Paper, Food Stuffs and Leather Goods**—A manufacturers' representative in **Capetown, Australia,** already representing three important English houses and covering the principal points in Natal, Transvaal, Orange River Colony, East and West Africa, desires to make Canadian connections. Their sample room will be available if desired. Payment of orders will be satisfactorily arranged before shipment.

93 **Hollowware**—A correspondent in **Hartford, Conn.,** asks for the names of Canadian manufacturers of hollowware, particularly cast iron pots.

94 **Lumber**—A firm of wholesale merchants established in Sydney, Australia, in 1864, desire to purchase hardwood lumber of ash and hickory for carriage builders. They ask for quotations f.o.b. ocean vessel ; will pay cash on shipment and send several references.

95 **Machinery (Lumbering)**—A company with headquarters at **Semarang, Java,** whose business is Java Teak Timber, and who farm at present 27 teak forests and cut all their own timber, is desirous of securing up-to-date machinery for cutting or transporting logs.

96 **Mica**—An **English** firm who state that they cannot obtain sufficient supplies of amber mica for their requirements are desirous of getting into communication with Canadian exporters of the same.

97 **Paper, Picture Mouldings, Cotton Goods, Pianos and Organs, Boots and Shoes, Paints and Varnishes**—A **Sydney, Australia,** correspondent desires to communicate with a few of the foremost makers in the above lines not represented in Australia. He offers his services for the purpose of securing desirable manufacturers' agents to handle any line he is entrusted with.

98 **Peas and Beans**—A firm in **Triest, Austria.** have asked to be placed in touch with Canadian exporters of peas and beans.

99 **Powder (Egg and Custard)**—A New York commission house desires to secure egg and custard powder put up in what they call "1d packets" for sale in **South Africa.**

100 **Producers (Gas)**—An engineering firm in Montreal desires to purchase a Suction Gas Producer of a size suitable for a gas engine from 15 to 30 horse power.

101 **Pulleys, Belting and Mill Furnishings Generally**—A **Manchester** firm who are specialists in power transmission and power saving appliances desires to get in touch with Canadian manufacturers of any articles connected with the transmission of power or for use in factories and workshops. They have had 20 years' experience in the trade, and their travellers cover all the United Kingdom.

102 **Pumps, Condensers, Air Compressors**—A correspondent in **Leeds, England,** desires correspondence with Canadian manufacturers in the above lines. A connection is already established and a good trade promised providing the goods will compete with those of the United States and British manufacturers.

103 **Pumps, Straps, Rivets, Bolts, Nuts, Iron Washers ; Steel, Cast and Wrought Iron Pipe, all Kinds of Rivets for Straps, India Rubber, Etc., Etc.**—An importing and exporting firm in **Cairo, Egypt,** asks for catalogues and price lists on the above lines. They wish both to purchase and work on a commission basis.

104 **Salmon (canned)**—A wholesale importing and indenting firm, established 1902 in **Melbourne, Australia,** desires to sell on commission large quantities of canned salmon. Quotations are asked for c.i.f. Australian ports. Sales will be made against sight draft. A reference is forwarded.

105 **Spokes, Shafts, Etc.**—A firm established in the wholesale business in **Cardiff, Wales,** in 1900, desire to purchase the above. They ask for delivery f.o.b. Cardiff per "Lord" line of steamers. References will be provided on application.

106 **Staves**—An important brewing firm in **London, England,** desires to procure in Canada hardwood slack barrel cooperage staves. They require first quality or No. 1 hardwood staves cut 28½″ long ⅜″ thick, average width 4″, shaped ready for building up, but not chamfered or croized. Either elm, oak, willow, gum, sycamore or ash staves will be satisfactory. Up to the present time these goods have been purchased from United States, but Canadian manufacturers will be given a preference.

107 **Steel**—An English correspondent has asked to be placed in touch with steel manufacturers and owners of blast furnaces in Canada with a view to opening up business.

108 **Wax**—Enquiry is made for names of Canadian shippers of candleberry wax (bayberry tallow) and maple wax.

109 **Wire of all Kinds and Gauges, Wire Cloth Suitable for Sieves, Screens, Etc., Bird Cages, and all Kinds of Fittings for Same**—A correspondent carrying on a wholesale and retail business in **Perth, Australia,** asks for catalogues and prices in the above and similar lines. Goods are wanted in quantities and quotations should include delivery at Perth, terms of payment to be arranged. References are forwarded.

110 **Vehicles, Furniture (Knock Down), Joinery, Mouldings (House and Picture)**—A firm of **New York** export commission agents ask for the lowest export price lists of above goods. They wish to purchase—payment in usual way.

INDUSTRIAL ACTIVITIES.

The business formerly carried on in Hamilton, Ont., by W. H. Schneider has been taken over by a new company to be known as The Hamilton Biscuit and Confectionery Co., Ltd. The capital stock is $100,000. In addition to general lines of confectionery they will manufacture jams, jellies and pickles.

A large rolling mill will shortly be established in Winnipeg by Mr. T. M. Kirkwood, of Toronto, who proposes to make bar iron, shapes, etc. The plant will be built on the most modern lines, and will be equipped with the best known appliances.

The Algoma Steel Co. have completed the manufacture and delivery of 10,000 tons of steel rails for the Government, and are now negotiating for another contract.

The Chipman-Holton Knitting Co. and the Geo. E. Tuckett & Sons Co., both of Hamilton, have let contracts for extensive additions to their factories.

CONVENTION REGISTER

Those who were present at the Annual Meeting in Montreal

Agnew, S. A.	Dominion Straw Goods Co.	Montreal
Alexander, Richard	B.C. Mills, Timber & Trading Co.	Vancouver
Allan, F. G. B.	Canadian Portland Cement Co.	Deseronto
Allen, Joseph	British American Dyeing Co.	Montreal
Alley, W. S.	Consolidated Cloak Co	Toronto
Angus, George	Official Stenographer	Toronto
Baillie, John	Dominion Oilcloth Co	Montreal
Baker, S. W.	Berry Bros	Walkerville
Ballantyne, C. C.	Sherwin-Williams Co.	Montreal
Barry, Edmund	J. B. Armstrong Mnfg. Co.	Guelph
Beaumont, Joseph	Jos. Beaumont Woollen Mills	Glenwilliams
Bellanger, J. A. A.	A. Belanger	Montmagny
Benson, George F.	Edwardsburg Starch Co.	Montreal
Birge, Cyrus A.	Canada Screw Co.	Hamilton
Birks, William	Henry Birks & Sons	Montreal
Blaiklock, H. M.	Pillow, Hersey Mnfg. Co	Montreal
Boeckh, E. C.	United Factories, Ltd.	Toronto
Booth, George	Booth Copper Co., Ltd	Toronto
Bordeau, H. A.	International Harvester Co	Montreal
Bowman, A. A	Canadian Rand Drill Co.	Sherbrooke
Boxer, George A.	Flett, Lowndes & Co.	Toronto
Braidwood, Francis	Canada Jute Co	Montreal
Bramley, William		Montreal
Brigden, George	Toronto Engraving Co	Toronto
Briggs, J. M.	A. E. Coates Co.	Toronto
Brittain, Alf. H.	Black Bros. & Co., Ltd.	Montreal
Burland, Jeffrey H.	Canada Engraving & Litho. Co.	Montreal
Burrows, Geo. H.	Canada Carriage Co	Brockville
Burton, P. H.	Merchants Dyeing & Finishing Co.	Toronto
Bush, H. T.	Standard Ideal Sanitary Co.	Port Hope
Callaghan, J. O.	Ontario Tack Co.	Hamilton
Campbell, J. B.	Acme Can Works	Montreal
Campbell, N. M.	Canadian Rand Drill Co	Sherbrooke
Caron, A. H.	Caron Bros	Montreal
Carrier, C. H.	Carrier, Laine & Co.	Levis, Que.
Chapin, R. H.	Allis-Chalmers-Bullock, Ltd	Montreal
Chaplin, J. D.	Welland Vale Mnfg. Co.	St. Catharines
Chaplin, W. J.	Canada Axe & Harvest Tool Co.	Montreal
Chapman, S. H.	Ontario Wind Engine & Pump Co	Toronto
Cleland, J. H.	Meaford Wheelbarrow Co.	Meaford
Cleveland, George F.	J. L. Goodhue & Co	Danville, P. Q.
Cockshutt, H.	Cockshutt Plow Co.	Brantford
Cockshutt, W. F.	President Board of Trade	Brantford
Code, T. A.	Perth Woollen Mills	Perth
Cooper, E. H.	Montreal Secretary	Montreal
Coyle, E. J.	Millichamp, Coyle & Co.	Toronto
Cragg, Fred. H.	Richard Roschman & Bros.	Toronto
Craig, Arthur E.	Firstbrook Box Co., Ltd	Toronto
Crean, Robert	Robert Crean & Co.	Toronto
Crossman, J. H.	Amherst Foundry	Amherst, N. S.
Darling, George	Darling Bros.	Montreal
Davidson, J.	Thos. Davidson Mnfg. Co.	Montreal
Davis, C. W.	The Williams Mfg. Co	Montreal
Dick, John	John Dick, Limited	Toronto
Donald, Richard A.	Pure Gold Mfg. Co., Limited	Toronto
Dougall, J. S. N.	McCaskill, Dougall & Co	Montreal
Drummond, Geo. E.	Canada Iron Furnace Co., Ltd	Montreal
Drummond, T. J.	Montreal Pipe Foundry Co.	Montreal
Dusseau, L. V.	Gendron Mfg. Co	Toronto
Eagen, N. B.	Canada Cork Co	Toronto
Eastmure, A. L.	Toronto Plate Glass Co	Toronto
Eastwood, James		New Glasgow, N.S.
Edmonds, W. L.	Maclean Publishing Co.	Toronto
Elder, J. A.	Office Specialty Mfg. Co	Montreal
Ellis, P. W.	P. W. Ellis & Co., Limited	Toronto
Esplin, George	G. & J. Esplin	Montreal
Ewing, A. H.	S. H. Ewing & Sons	Montreal
Ewing, Royal L. H.	S. H. & A. S. Ewing	Montreal
Ewing, S. W.	S. H. Ewing & Sons	Montreal
Flavelle, J. D.	Flavelle Milling Co.	Lindsay
Fleck, Alexander	Alex. Fleck, Limited	Ottawa
Findley, Thomas	Massey-Harris Co., Limited	Toronto
Forbes, George D.	R. Forbes Co., Limited	Hespeler
Foreman, F. W.	Dominion Wire Mfg. Co	Montreal
Fortier, J. M.	J. M. Fortier, Limited	Montreal
Fortier, Joseph		Montreal
Foy, George J.	Owen Sound Portland Cement Co.	Toronto
Fraser, E. J.	Singer Mfg. Co.	Montreal
Frost, Charles B.	Frost & Wood Co	Smith's Falls
Fry, E. J.	Peck Rolling Mills	Montreal
Ganong, J. E.	St. Croix Soap Mfg. Co.	St. Stephen, N.B.
Gardner, Robert	Robt. Gardner & Son	Montreal
Gartshore, W. M.	McClary Mfg. Co	London
Gellman, H. H.		New York
George, W. K.	Standard Silver Co., Limited	Toronto
Gibbons, J. J.	Lever Bros.	Toronto
Gill, John M.	Jas. Smart Mfg Co	Brockville
Goldstein, B.	Dominion Tobacco Co	Montreal
Goldstein, J.		Montreal
Gordon, Charles B.	Standard Shirt Co	Montreal
Gordon, E. P.	Globe Hat Works	Montreal
Gould, James S.	Gould Mfg. Co.	Smith's Falls
Granthan, E. T.	Imperial Cotton Co.	Hamilton
Gravel, A. S.	The A. Gravel Lumber Co	Etchemin, Que.
Gray, Robert	Wm. Gray & Sons Co.	Chatham
Greer, A. B.		London
Greig, Robert	Robt. Greig Co.	Toronto
Griffin, J. A.	Griffin & Kidner Co.	Hamilton
Griffin, Watson		Toronto
Gudewill, C. Ed	Montreal Pipe Foundry Co.	Montreal
Guillet, E.	E. Guillet & Co.	Marieville, P.Q.
Guillet, H. D.	E. Guillet & Co	Marieville, P.Q.
Gundy, W. P.	W. J. Gage & Co., Limited	Toronto
Gurd, Charles	Charles Gurd & Co.	Montreal
Gurney, C. E.	Gurney Foundry Co., Limited	Toronto
Gurney, Edward	Gurney Foundry Co., Limited	Toronto
Hamilton, Wm	Wm. Hamilton Mfg. Co	Peterboro
Hannon, H. H.	International Harvester Co., Ltd.	Hamilton
Harmer, R.	Sawyer & Massey Co., Limited	Hamilton
Harris, Burton S.	Massey-Harris Co	Toronto
Harris, Lloyd	Underfeed Stoker Co.	Toronto
Harrower, G. H.	G. H. Harrower Co., Limited	Montreal
Hawksworth, F.		Montreal
Hedley, James	Monetary Times Ptg. Co	Toronto
Heintzman, Gerhard	Gerhard Heintzman, Ltd	Toronto
Heney, W. F.	E. N. Heney & Co.	Montreal
Henry, Knox	Surprise Spring Bed Co.	Montreal
Hersey, John R.	Pillow & Hersey Mfg. Co.	Montreal
Hethrington, T. A.	T. Hethrington	Quebec
Hewson, H. L.	Hewson Woollen Mills	Amherst, N.S.
Hewton, J.	Kingston Hosiery Co	Kingston, Ont.
Hobson, R.	Hamilton Iron & Steel Co	Hamilton
Hodson, E.	Laidlaw Bale-Tie Co.	Hamilton
Holdroyd, H.		Glen Williams
Hoops, H. C.	Ault & Wiborg Co., Limited	Montreal
Hopkins, F. H.	Dominion Wire Rope Co., Ltd.	Montreal
Horsfall, Joseph	Montreal Woollen Mills Co	Montreal
Howell, Geo. A.	Grip Limited	Toronto
Howland, Peleg	Graham Nail Works	Toronto
Hutchins, J. B.	Eclipse Whitewear Co.	Toronto
Jack, Watson	Robb Engineering Co.	Amherst, N.S.
Jacobs, H.		Montreal
Jacobs, S. A.	New York Silk Waist Co.	Montreal
Jaynes, A. L.	Toronto Electrical Works	Toronto
Jenckes, J. M.	Jenckes Machine Co.	Sherbrooke, P.Q.
Jephcott, James	Montreal Lithographing Co.	Montreal
Jones, L. P.	Dominion Iron & Steel Co.	Sydney, N.S.
Joubert, S. D.	H. Lamontagne & Co.	Montreal
Kemp, A. E.	Kemp Mfg. Co.	Toronto
Kennedy, James C.	Imperial Cement Co.	Owen Sound
Kennedy, M.	Wm. Kennedy & Sons, Limited	Owen Sound
Kerr, Frederick	Ledoux Carriage Co., Limited	Montreal
Kerr, R.	Kerr Engine Co	Walkerville

Kerry, W. S.	Kerry, Watson & Co.	Montreal
Kilbourn, J. M.	Lakefield Portland Cement Co.	Lakefield
Lang, G. C. H.	Lang Tanning Co.	Berlin
Laporte, H.	Mayor of Montreal	Montreal
Leslie, W. S.	John Lysaght, Limited	Montreal
Lester, C.	John McDougall Cale. Iron Works	Montreal
Lomas, A. G.		Sherbrooke, P.Q.
Lowndes, C. B.	Lowndes Co., Limited	Toronto
McArthur, J. D.	Canadian Oak Belting Co.	Brockville
McCulloch, R. O.	Goldie & McCulloch Co.	Galt
McDougall, Edward.	John McDougall Cale. Iron Works	Montreal
McGibbon, D. L.	Canadian Rubber Co.	Montreal
McGill, J. J.		Montreal
McGregor, W. J.	McGregor, Harris & Co.	Toronto
McIntosh, D. T.	McIntosh Granite & Marble Co.	Toronto
McKay, Wm.	Robb Engineering Co., Limited	Amherst, N.S.
McKeown, J. H.	Parker's Foundry	Montreal
McKinnon, John S.	S. F. McKinnon & Co., Limited	Toronto
McLaren, D. W.	J. C. McLaren Belting Co.	Montreal
McLaughlin, R.	McLaughlin Carriage Co., Ltd.	Oshawa
McMichael, P.	Dominion Radiator Co.	Toronto
McNaught, W. K.	American Watch Case Co., Ltd.	Toronto
McNaughton, J. P.	Dominion Iron and Steel Co.	Sydney, N.S.
McLean, A.	Robb Engineering Co.	Amherst, N.S.
McLean, Hugh C.	The Commercial	Winnipeg
Mackie, J. M.	Laurie Engine Co.	Montreal
Macoun, Leslie S.	L. B. Seward Lubricating Co.	Ottawa
Mallison, Fred.	Canadian Skewar Co., Ltd.	Hespeler, Ont.
Marriott Charles	G. Goulding & Sons	Toronto
Martin, G. C.	Colonial Ink Co.	Peterboro
Mason, Wm. H.	Amer. Abell Engine & Thresher Co.	Toronto
Martel, S. H., Jr.	Martel, Stewart Co., Ltd.	Montreal
Matthews, Chas. A.	Globe Printing Co.	Toronto
Mathews, J. E.	Lymburner & Mathews	Montreal
Matthew, W. G.	Gananoque Spring and Axle Co.	Gananoque
Maxwell, James	David Maxwell & Sons	St. Marys
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Medhurst, F. H.	F. H. Medhurst & Lloyd	London, Eng.
Meek, Chas D.	Stewart, Howe & Meek Co.	Toronto
Miller, W. H. D.	Manager Transportation Dept.	Toronto
Moffat, F. M.	Gunns, Limited	Toronto
Moffat, T. Jr.	The Moffat Stove Co., Ltd.	Weston, Ont.
Mole, A. B.	Dominion Cotton Mills Co.	Montreal
Morden, W. Grant	Canada Wood Mnfg. Co.	Farnham, Que.
Morgan, Thos. M.	Crescent Portland Cement Co.	Longue Point, P.Q.
Morin, Dr. C. J.		Quebec
Morrice, R. B.	D. Morrice, Sons & Co.	Montreal
Morrice, W.	D. Morrice, Sons & Co.	Montreal
Moulton, H. A.	Moulton & Co.	Montreal
Mowat, D.	Western Canadian Fish Co.	Vancouver, B.C.
Munro, Robert	Canada Paint Co.	Montreal
Muntz, George H.	Victoria Shoe Co.	Toronto
Murray, G. M.	Industrial Canada	Toronto
Murray, J. P.	Toronto Carpet Mfg. Co., Ltd.	Toronto
Nichols, H. G	Canadian General Electric Co.	Toronto
O'Grady, F. G.	Canadian Iron & Foundry Co.	Montreal
Oliver, A. J.	R. McDougall Co., Ltd.	Galt
Packard, E.	L. H. Packard & Co.	Montreal
Packard, L. H.	L. H. Packard & Co.	Montreal
Paterson, J. H.	Toronto Hardware Mnfg. Co.	Toronto
Peacock, B. F.	Peacock Bros.	Montreal
Peacock, F. I.	Peacock Bros.	Montreal
Peck, T. Edmond.	Peck Rolling Mills, Ltd.	Montreal
Peters, J. Henry	J. Henry Peters Co.	Toronto
Phillips, Chas. F. J.	Morton, Phillips & Co.	Montreal
Picard, Joseph	Rock City Tobacco Co.	Quebec.
Pinchin, R.	McAlpin Consumers Tobacco Co.	Toronto
Polson, F. B.	Polson Iron Works	Toronto
Proctor, L. M.	Fernie Lumber Co.	Fernie, B.C.
Ramsay, A.	A. Ramsay & Son	Montreal
Rathbun, E. W.	The Rathbun Co.	Deseronto
Rattray, D. J.	Armour, Ltd.	Toronto
Rhodes, E. R.	Rhodes, Curry & Co.	Amherst
Rickaby, J. B. S. S.	R. P. Rithet & Co.	Victoria, B.C.
Ritchie, F. A.	Ritchie & Ramsay, Ltd.	Toronto
Robb, D. W.	The Robb Engineering Co., Ltd.	Amherst, N.S.
Roden, Thomas.	Roden Bros.	Toronto
Rolland, J. D.	Rolland Paper Co.	Montreal
Rolland, S. J.	Rolland Paper Co.	Montreal
Roy, R. M.	Hamilton Bridge Co.	Hamilton
Ruddy, Joseph	Brantford Starch Works, Ltd.	Brantford
Russell, J. C.	John McDougall Cale. Iron Works.	Montreal
Rutherford, Wm.	Wm. Rutherford & Sons Co.	Montreal
Rutherford, Andrew.	Wm. Rutherford & Sons Co.	Montreal
Sadler, Geo. W.	Sadler & Haworth	Montreal
Sapery, W.	Syracuse Smelting Works	Montreal
Saunders, Alex.	Goderich Organ Co.	Goderich
Schnark, Chas. W.	DeLaval Mfg. Co.	Montreal
Sexton, D. M.	D. M. Sexton & Co.	Montreal
Sheridan, J. T.	Pease Foundry Co., Ltd.	Toronto
Sinclair, J. M.	Eureka Mineral, Wool & Asbes. Co.	Toronto
Slater, C. E	Slater Shoe Co.	Montreal
Slemin, Charles	Office Specialty Mfg. Co.	Toronto
Smaill, Wm.	Canada Horse Nail Co.	Montreal
Smallman, T. H.	Canada Chemical Mfg. Co.	London
Smith, C. Howard	Kinleith Paper Co.	Toronto
Smith, Clarence F.	Jas. McCready Co.	Montreal
Smith, Edgar M.	Canadian Trade Journals, Ltd.	Montreal
Smith, W. H.	Canadian Feather & Mattress Co.	Toronto
Spafford, S. L.	Nichols Chemical Co.	Toronto
Steedman, J. P.	Gurney Scale Co.	Hamilton
Stevenson, Jas. S.	Berry Bros.	Walkerville
Stevenson, R. R.	Montreal Cotton Co.	Montreal
Stewart, J. F. M.	Assistant Secretary	Toronto
Stewart, F. W.	Salem Co., Ltd.	Montreal
Stewart, W. J.	Montreal Watchcase Co.	Montreal
Still, Edward	H. J. Fisk & Co.	Montreal
Stone, William	Toronto Litho. Co.	Toronto
Storey, T. J.	Canada Carriage Co.	Brockville
Strathy, F. W.	Maple Leaf Woollen Mills	Toronto
Stroud, H.	Paris Wincey Mills Co.	Paris
Sykes, John	Sykes & Ainley	Glen Williams
Taylor, A. W.	Parmenter & Bullock	Gananoque
Taylor, J. A.	Truro Condensed Milk Co.	Truro
Taylor, J. M.	Taylor, Forbes Co.	Guelph
Tetrault, N. J., Jr.	Tetrault Shoe Co.	Montreal
Thomas, Arnold W.	Copp, Clark Co., Ltd.	Toronto
Thomson, W. J.	Hamilton Facing Mills Co.	Hamilton
Thorn, J. O.	Metallic Roof. Co. of Canada, Ltd.	Toronto
Timmons, J. J.	M. Timmons & Son	Quebec
Tindall, W. B.	Parry Sound Lumber Co.	Toronto
Torrance, R. L.	J. B. Armstrong Mfg. Co.	Guelph
Tudhope, Hugh R.	Tudhope Carriage Co.	Orillia
Tudhope, James A.	Tudhope Carriage Co.	Orillia
Turgeon, Z.	Elie Turgeon	Quebec
VanBever, L. C.	Armour, Ltd.	Toronto
Vandry, G. A.	J. Arthur Paquet	Quebec
Vilas, W. F.		Cowansville, Que.
Walker, Geo. W.	Hart Corundum Wheel Co.	Hamilton
Wallace, C. S.	Matthew Moody & Sons Co.	Terrebonne
Ward, F. J.	Jno. P. Mott & Co.	Halifax
Warnock, C. R. H.	Galt Knitting Co., Ltd.	Galt
Watson, F. H.	Toronto Bolt & Forging Co.	Toronto
Watt, John	Diamond Flint Glass Co.	Toronto
Wells, Geo. P.	W. C. Wells	Palliser, B.C.
Westgate, J. J.	Hudson Bay Knitting Co.	Montreal
Wheaton, C. F.	Dodge Mfg. Co.	Toronto
Whitehead, T. H.	Brantford Carriage Co.	Brantford
Whitton, F. H.	Ontario Tack Co.	Hamilton
Wickett, S. R.	Wickett & Craig	Toronto
Wildman, J. F.	Office Specialty Mfg. Co.	Toronto
Wiley, J. M.	Dominion Packing Co	Charlottetown
Wilkins, R. C.		Montreal
Willett, Brock	Richelieu Woollen Mills	Chambly
Willett, S. T.	Richelieu Woollen Mills	Chambly
Williamson, D. T.	Brantford Starch Works	Brantford
Williamson, W.	Colin, McArthur & Co.	Montreal
Wilson, Dan.	Wilson Bros.	Collingwood
Wilson, F. D.	Wilson & Sons	Toronto
Wise, Sir W. Lloyd.		London, Eng.
Wood, J. E.	Nova Scotia Secretary	Halifax
Woodland, J. M.	J. M. Woodland & Co.	Toronto
Wright, E. A.	Canadian Rubber Co.	Montreal
Wright, Henry	A. F. MacLaren Imp. Cheese Co.	Toronto
Younge R. J.	Secretary	Toronto

CREDIT INSURANCE

The incorporation of the Canadian Credit Indemnity Co., Ltd., marks the beginning of a new chapter in the history of Canadian insurance.

For years the insurance business of this country has been developing at a rate which might lead one to suppose that all contingencies of loss had already been provided against. Up to the present, however, no attempt has been made to afford protection against the very serious loss which occurs through the granting of credit. The lack of such protection has repeatedly been the cause of worry and embarrassment, and in times of commercial depression its need has been particularly emphasized.

The principle of credit insurance is by no means a new one. It has been successfully applied for more than ten years in the United States, and through the operations of companies across the border Canadians will doubtless have become more or less familiar with the general practice there followed. Credit insurance does not attempt to cover all bad debts, but only those in excess of the average percentage of preceding years. In every business there are bound to be a number of book debts that are uncollectable. A firm doing an annual business of $500,000 will perhaps contract on an average each year bad debts to the extent of one-half of one per cent, or $2,500. This loss they must bear themselves, and if the business is conducted on sound principles, due provision will have been made for it in fixing the scale of profits. Against such a loss no credit insurance is obtainable. Protection can be secured, however, against any loss in excess of this average. Should the amount of bad debts for any given year amount to $4,000, the extra $1,500 would constitute a valid claim against the company accepting the risk.

Through the instrumentality of credit insurance debts can be secured in such a manner as to greatly facilitate the negotiating of loans, and in numerous other ways the services of such a company will be appreciated by the business community of this country. As yet the field in Canada is unoccupied. In the United States it has long since been shown that this branch of insurance can be carried on at a substantial profit, so that with conservative management there seems no reason why this new Canadian company should not have a bright and successful future.

THE RAILROAD TIE OF THE FUTURE

THE problem of the perishable railroad tie is beginning to assume serious proportions in the United States. It is estimated that 110,000,000 are required every year to take the place of old ties that have become unfit for use, while millions more are called for in the construction of new roads. With such an enormous consumption the drain on the forests has necessarily been very severe. Prices have steadily advanced, and as the contractors have been compelled to go further and further back from the railroad for their logs, the cost of transportation to consuming points has likewise increased.

To the solution of this problem both the railroad companies and the forestry experts have given much careful thought. Various experiments have been conducted, some of them under government supervision, with a view to discovering new methods for preserving wood. It is pointed out that while the average life of a pine tie on the New York Central is but five years, beech ties on the Great Eastern of France have been made to stand for thirty-five years after being impregnated with tar oils. There can be no doubt that the discovery of a perfect wood preservative would furnish a speedy solution of this vexatious economic problem, but pending the outcome of the experiments referred to, investigations are being conducted along other lines as well. It is stated that the Carnegie Steel Co. are experimenting in the rolling of steel ties, and it seems not unlikely that they will meet with some degree of success. Others again have suggested that the railways cultivate along their rights of way quick growing trees like the catalpa, in order that a constant supply of material may be available for renewals.

Whatever the tie of the future may be, there is every reason to believe that the days of the old wooden "sleeper" are numbered.

FELLING TREES BY ELECTRICITY

It is reported in the German press that successful experiments have been made in various forests of France in cutting trees by means of electricity. A platinum wire is heated to a white heat by an electric current and used like a saw. In this manner the tree is felled much easier and quicker than in the old way, no sawdust is produced, and the slight carbonization caused by the hot wire acts as a preservative of the wood. The new method is said to require only one-eighth of the time consumed by the old sawing process.—*Forestry and Irrigation.*

CRYOSTASE, A NEW CHEMICAL COMPOUND

Public Opinion makes mention of a curious chemical product called cryostase, which has recently been discussed by some of the scientific periodicals in Germany. The product has not as yet been applied to the arts or to the industries, but that such will doubtless be done may be inferred from the properties of the compound. These properties are that the product liquefies under cold and congeals under heat, a condition which is the direct contrary of that which takes place in other substances. Cryostase is described as a mixture of equal portions of phenol, saponine and camphor, to which is added a little of the essence of turpentine. This is the first body which has been found that enjoys the remarkable properties of solidification under heat and liquefication under cold. The albuminoids, such as the albumen of the egg, coagulate under heat, but cold does not bring them back to the liquid state. With cryostase, however, the operation may be performed over and over again. As yet no details are available as to the new compound, and the temperature of solidification is not known, but it is probable that the phenomena may be varied by modifying the proportion of the constituents.

MADE AND PRODUCED IN CANADA

Distinctly Canadian in Sentiment is the Fair to be Held this Month in Brockville

During the week ending October 20th, the Ladies' Auxiliary of the Brockville General Hospital propose holding an Exhibition for the Canadian artisan, farmer and manufacturer. In a prospectus which has been issued, the purpose of the fair is announced as being two-fold; (1) To nourish the spirit of patriotism and to induce consumers to patronize home industries; (2) To aid the Brockville General Hospital, which is doing a noble work and needs assistance. The affair will be held under the patronage of the Canadian Manufacturers' Association, who can heartily recommend it to everyone whose sympathies lie with the advancement of the "Made in Canada" idea.

The town of Brockville possesses many attractions which make it an especially desirable place for the holding of an exhibition of this kind. Situated at the eastern end of the famous Thousand Islands in the river St. Lawrence, it commands a view of one of the most beautiful spots in Canadian territory. Since its early days, so rich in historic memories, it has steadily grown until to-day it is one of the handsomest and most substantial towns in Ontario. Its population is nearly nine thousand. It is a particularly busy manufacturing centre, possessing a large carriage factory, an extensive stove and hardware foundry, a large glove factory, a hat factory, a mineral water works, besides a number of lesser industries. It owns its own lighting and water works plant, and was one of the first Canadian towns to demonstrate the merits

of municipal ownership. Brockville is also famous as being the centre of the celebrated dairy district which bears its name.

Near the centre of the town is situated the large Armory where the exhibition will be held. It will be distinctly a "Made in Canada" fair, from which foreign goods will be absolutely excluded. Every effort will be made to promote the commendable sentiment that Canadians should give preference to goods made in Canada. The Brockville ladies, in their pursuit of this laudable object, merit the support of every loyal Canadian manufacturer, and it is to be hoped that a due appreciation of their efforts will be shown by granting them the patronage which they are soliciting.

EXPORTS OF MANUFACTURES.

For the first time in the history of the United States manufactures are exceeding agricultural products in the exportation of domestic products. Figures just issued by the Department of Commerce and Labor, through its Bureau of Statistics, show that in the month of July manufactures exported amounted to 40 million dollars, against 31 millions of agricultural products; and in the month of June manufactures amounted to nearly 42 millions, against 37¼ millions of agricultural products. In former years agricultural products have greatly exceeded manufactures in the exports of the country, and it is only in recent months that manufactures have equaled or exceeded agricultural products in the export statements. Even in the seven months ending with July, 1904, agricultural products exceeded manufactures by nearly 100 million dollars, but in the month of May, 1904, manufactures for the first time in the history of the country exceeded agricultural products in the statement of domestic exports, and this was again the case in June and in July. In the month of May, 1904, exports of manufactures exceeded agricultural products by about one million dollars; in June the excess of manufactures over agricultural products was nearly nine million dollars. In the three months of May, June and July, 1904, the total value of agricultural products exported was $106,503,133, while the total value of manufactures exported in the same period was $120,789,769. That there is a marked growth in the exportation of manufactures is shown by a comparison of the figures of 1904 with those of earlier years. The total value of manufactures exported in the seven months ending with July, 1904, is $285,495,728, or an average of more than 40 million dollars per month. In the seven months ending with July, 1903, the total was $244,607,852, an average of 35 millions per month. At this rate of increase the exports of manufactures during the calendar year of 1904 would exceed those of 1903 by about 60 million dollars, and bring the grand total for the year far in excess of any preceding year.—*Railway Age.*

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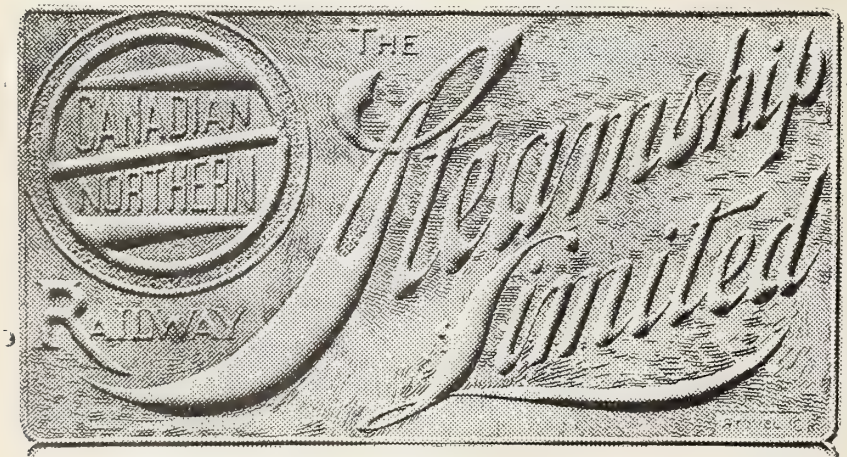
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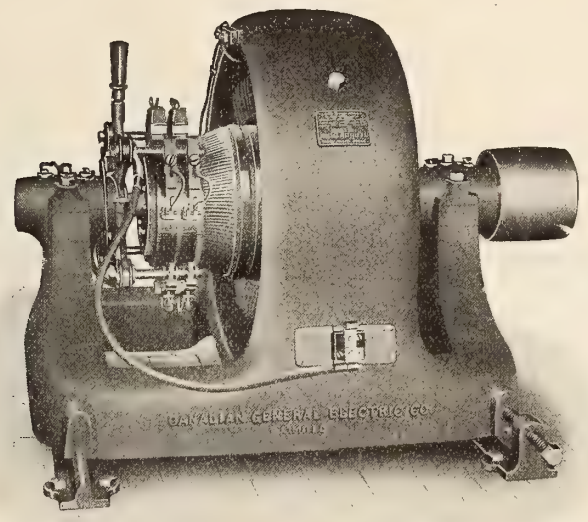
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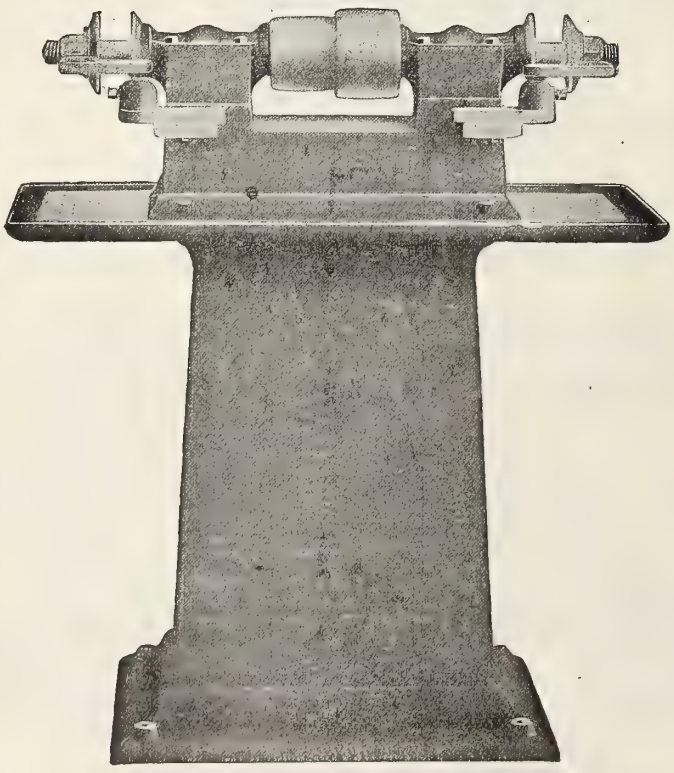


Hart Corundum Wheel Co., Limited

Hamilton, Canada

There are still some manufacturers who foolishly persist in using Emery Wheels. Emery is a mechanical admixture of corundum and magnetite or hematite. It is the presence of the corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain.

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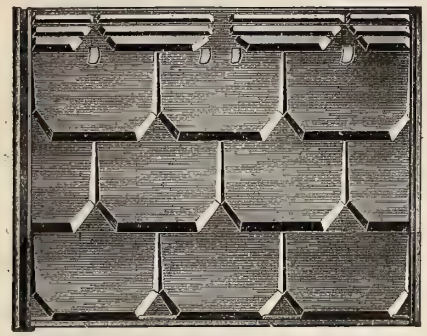
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We have received the highest awards at the various international expositions.

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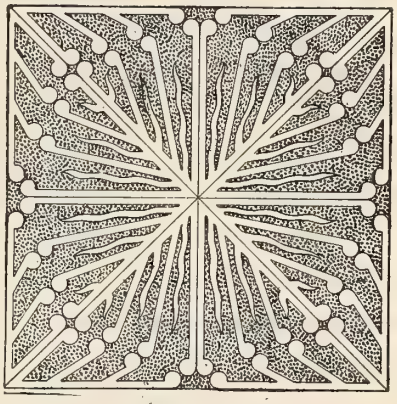


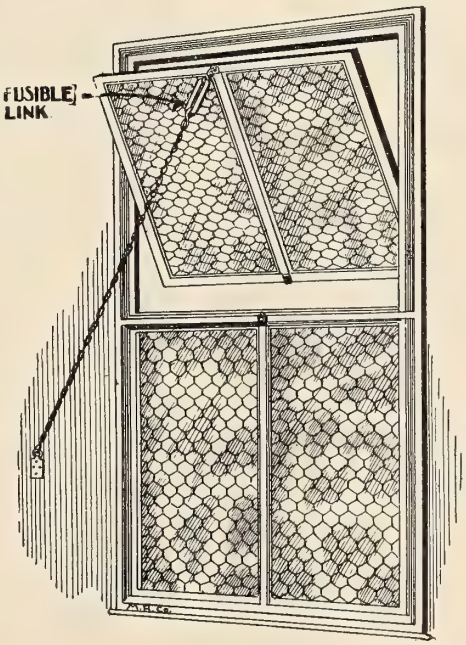
Plate No. 430

We make numerous artistic patterns.

Our Patent Fire-proof Windows

Made of hollow sheet metal and glazed with wired glass, embody the latest ideas in fire-proof construction. This illustration shows patent automatic closing and locking device.

Send for descriptive pamphlet.



We also make

Fire-proof Doors
Metallic Lathing
Metallic Roofing
Corrugated Iron
Zinc Ornaments
Ventilators
Eavetroughs
Skylights
Cornices
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Sidings

The Metallic Roofing Co. of Canada, Limited

TORONTO - CANADA

The 1903 Edition of the

Canadian Trade Index---456 Pages

In English, French and Spanish, will be sent to any address FREE on application to

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TORONTO.

PERFORATED SHEET METALS

IN

Brass, Copper, Steel, etc.



All sizes of perforations and thickness of metal for—

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GRAIN CLEANING MACHINERY

BEE KEEPERS

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Office and Factory:
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ROCK CITY CIGAR CO.
LIMITED

MANUFACTURERS OF

High Grade **Cigars**

Office & Factory
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Incorporated by Act of Parliament 1885.

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RESERVE FUND - - - - - $700,000

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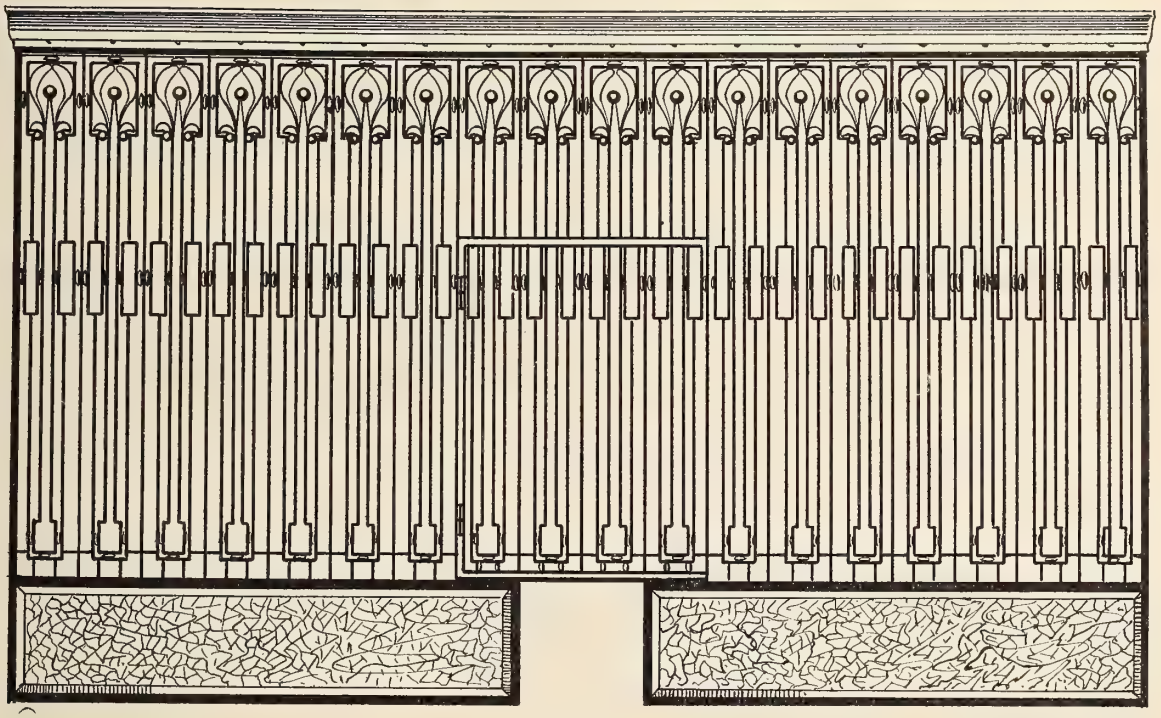
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Toronto Wire, Iron and Brass Works Co., Limited

117 King St. West, TORONTO, CANADA

The Largest Curers under the British Flag.

'DAVIES'

This Brand the Guarantee of Excellence.

We carry large stocks of the following:

PURE LARD

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BEEF BUTTOCKS, &c.

WRITE FOR QUOTATIONS.

THE WM. DAVIES CO., LIMITED,

Toronto Canada

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Messrs. Eastmure & Lightbourn

Beg to announce their removal from 3 Toronto Street, Toronto (which premises they had continuously occupied since the erection of same fourteen years ago), to the new

Eastmure and Lightbourn Building,

61-65 Adelaide Street East, Toronto.

(The site formerly of the east wing of the Old Court House Block)

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THE QUEEN CITY PLATE GLASS & MIRROR COMPANY, LIMITED,
THE REGISTRY COMPANY OF NORTH AMERICA, LIMITED.

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And all other general connections under the same management will in future be situated at this address.

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BY APPOINTMENT
TO HIS MAJESTY THE KING,
AND
TO HER LATE MAJESTY QUEEN VICTORIA,
AND
TO HIS ROYAL HIGHNESS THE PRINCE OF WALES.

"Canadian Club" Whisky

—Distilled and Bottled in Bond by—

Hiram Walker & Sons
LIMITED

Walkerville Ontario Canada

New York Chicago Mexico City London Victoria, B.C.

The AGE AND GENUINENESS OF EVERY BOTTLE IS GUARANTEED by the stamp of the Canadian Excise Department over the capsule.

An absolutely pure and thoroughly matured spirit, of most delicate flavor and bouquet.

"CANADIAN CLUB" is highly popular with the medical profession, because of its uniformly high character, and its acceptability to persons of weak stomach.

The great merit of this whisky is attested by the fact that IN THE COMPARATIVELY SHORT SPACE OF TWELVE YEARS IT HAS FORCED ITS WAY INTO EVERY PART OF THE CIVILIZED WORLD, and is now admitted to be more generally distributed than any other single brand of liquor.

MADE IN CANADA



MADE IN CANADA

"Maple Leaf"

STITCHED COTTON DUCK BELTING

"MAPLE LEAF" is made of the best cotton duck, woven to our own special formula.

"MAPLE LEAF" *is the truest running belt on the market.*

"MAPLE LEAF" is superior to either Rubber or Leather and in many places will do work that no other make of belt will.

"MAPLE LEAF" *is suitable for all kinds of Factories, Mills, Etc., for power and carrying.*

Main Drive Belts a Specialty.

Ask for "MAPLE LEAF" and take no other. BEWARE OF IMITATIONS.

Use our "MAPLE LEAF" Belt Dressing.

Manufactured only by **Dominion Belting Co., Limited**

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"OLD SYDNEY COAL"
(Shipping Port, North Sydney)

ADDRESS ALL CORRESPONDENCE TO HEAD OFFICE.

The Canada Chemical Manufacturing Co., Limited

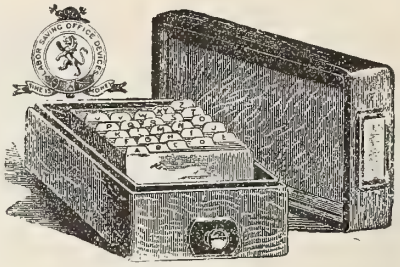
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Manufacturers of

Acids and Chemicals

OF COMMERCIAL OR CHEMICALLY PURE QUALITY, FOR TANNERS, OIL REFINERIES, WOOLEN MILLS, PAPER MILLS AND ALL INDUSTRIAL PURPOSES.

Offices and Chemical Works at LONDON.
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The Detail Settler

Have you our Card System?

Have you the up-to-date business methods? Have you noticed how business systems have changed? The old ones won't do now; too much red tape; too much worry, and kicks galore. Isn't it time for a change?

The **Card System** is the key note of twentieth century commercialism. If you are dubious, come to us, we'll be pleased to explain their many uses. You can't afford to be without them any longer.

Remember, all prosperous business houses use them

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WE CARRY IN STOCK THE BEST MAKES OF THE ABOVE GOODS.

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PARAGON,
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WE ARE EXPERT AT REPAIRING NUMBERING MACHINES OF ANY MAKE. DO NOT SEND YOUR MACHINES TO THE OTHER SIDE WHEN YOU CAN GET THEM REPAIRED IN CANADA.

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HAMILTON, ONT.
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EVERY CLAIM WE HAVE MADE FOR THE SUPREME EXCELLENCE OF

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HAS BEEN FULLY JUSTIFIED BY EXPERIENCE

TRY IT!

The Canadian Salt Company
Limited.





20 CENTURY BRAND REG'D

MEN'S FINE TAILORED GARMENTS

"MADE IN CANADA"

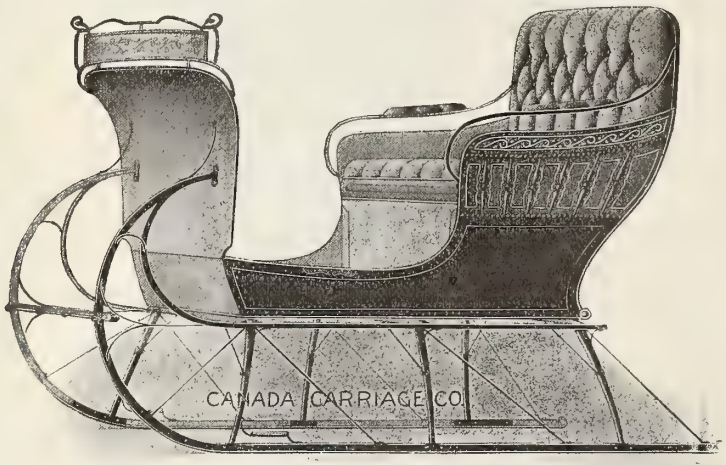
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ELECTRIC LIGHT
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FOR UNDERGROUND INSTALLATIONS.

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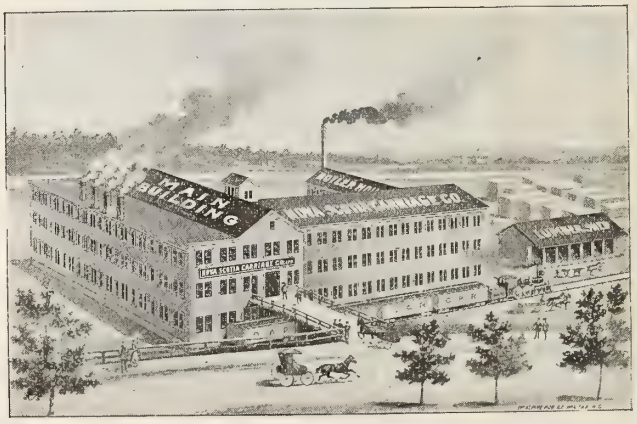
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Canada Carriage Company

BROCKVILLE - ONT.

SEND FOR CATALOG AND PRICES.

Carriages, Road Carts and Sleighs



We can give the "Maritime" trade better service than any other manufacturer. The advantage of being able to freight a couple of our rigs about as low as the proportionate cost in a car from other provinces is two-fold.

FIRST—Our ability to supply anything you may not have in stock at short notice, or meet some little change desired, without much, if any extra expense.

SECOND—By not requiring the heavy stock necessary where you have to buy carloads, you save interest in carrying it, avoid a great deal of risk of fire, and have more chance to fill in styles you see are running.

You don't have to spend time in trying to convince your trade that both our goods and we ourselves can be relied on—they are THE STANDARD. Some others you have to waste a lot of time over, and it all counts.

The NOVA SCOTIA CARRIAGE COMPANY, Ltd.
KENTVILLE, N. S.

FORESIGHT

Show your wisdom by equipping your premises with our **Fireproof Windows.** It lowers your Insurance Premiums.

—CONTRACTOPS AND MANUFACTURERS OF—

METAL { Ceilings, Cornices, Roofing, Siding, Fireproof Skylights

We are equipping the following buildings with our Fireproof Windows :— W. R. Brock & Co., Ltd.; Gordon-MacKay & Co., Ltd.; Gillespie Fur Co. Ltd., of Toronto, and McDonald & Wright, Winnipeg.

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For Steam, Heat and Cold Water Pipes, Flues, Furnaces, Boilers, Etc.

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Proved by experts in Canada, Great Britain and the United States to be highest nonconductor in the world.

In use by all the principal Railways in Canada, Great Britain and India, and by the British Admiralty and War Office.

Mica Weather Proof cover is the most durable as well as being the highest nonconductor that is made.

—Manufactured solely by—

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1902 NOTRE DAME

WHOLESALE MANUFACTURERS OF

HARNESS, TRUNKS & BAGS, MILITARY

AND STOCK SADDLES, LEGGINGS

Leather, Saddlery Hardware & Shoe Findings.



Sample Rooms in Toronto, Winnipeg, Brandon and Vancouver

Factories and Warehouse

Balmoral Block, 1902 Notre Dame St., MONTREAL

You Cannot Begin Too Soon

to accustom your children with the "Made in Canada" motto. Let their earliest ideas be associated with good things that are "Made in Canada" and you will lay the foundation for a sentiment which will grow and become a power in this land for the advancement of our industrial prosperity.

From Infancy to Old Age

we look after man's requirements in the furniture line.

For the baby we make cradles, carriages and go-carts of reed and rattan.

For children in the nursery, we make doll-carts, toy barrows, sleighs and kindergarten sets.

For the grown-ups we make artistic house furniture.

For the business man we make office chairs.

For decrepit old age we make invalid chairs in which the evening of life can be passed in solid comfort.

A Descriptive Catalogue

will be mailed for the asking.

Catalogue A—Baby Carriages, Go-Carts, etc.

Catalogue B—Reed, Rattan and Artistic Furniture.

Catalogue C—Invalid Chairs.

Catalogue D—Velocipedes, Tricycles, and Children's Toy Vehicles.

Catalogue E—Children's Sleighs.

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Office—17 Lemoine Street - MONTREAL
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Garnetted Wastes *Wool Extracts*
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THE GERHARD HEINTZMAN
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The
Standard Ideal Sanitary Co'y
Limited.

Sole Manufacturers in Canada
... OF ...

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COMPLETE LINE

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Cowan's COCOA, CHOCOLATE, CREAM BARS, WAFERS, &c.

Cowan's MILK CHOCOLATE,

MADE FROM THE PUREST CANADIAN MILK; VERY SUPERIOR QUALITY.

Cowan's CAKE ICINGS, &c.

MANUFACTURED BY
THE COWAN CO., LIMITED,
TORONTO.

"Automobile Corner," Toronto

Corner Bay and Temperance Streets.



THIS GARAGE IS OPEN DAY AND NIGHT

The premises of the Canada Cycle and Motor Company, located at the corner of Bay and Temperance Streets, one block south of the main entrance to the City Hall, affords a thoroughly equipped and convenient garage for the accommodation of Toronto automobilists.

As the premier organization to foster automobiling in Canada the Canada Cycle and Motor Company is in a leading position in the matter of agencies. The builders of successful cars in the United States naturally prefer to have their Canadian business handled by a native corporation standing high in reputation and thoroughly covering the territory.

The records made at the first Canadian Automobile races, held in Toronto and Hamilton, proved the undoubted superiority of the Canada Cycle and Motor Company's cars. A four cylinder "Peerless" car and a three cylinder "Thomas" car ran first and second in a two mile track race between heavy touring machines. In a competition between cars selling at $2,100 a Canada Cycle and Motor machine, the "Ford," selling at $1,100, easily beat its more expensive rivals. The "Autocar" also won honors at these races. In Hamilton the best time of the day was made by a "Peerless."

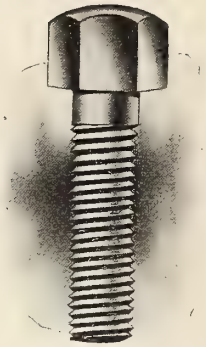
The results of automobile contests in Canada and the records made by the "Peerless," "Packard" and "Stevens-Duryea" cars in the United States, prove conclusively that the Canada Cycle and Motor Company are agents for the most successful automobiles made on this continent.

Canada Cycle & Motor Co. Limited

Builders of the "Ivanhoe" electric runabout. **TORONTO**

OUR BUSINESS IS A SPECIALTY

Our line comprises ALL SHAPES, SIZES and FINISHES of COLD PRESSED NUTS.



CAP, SET and PLANER, SCREWS, PATCH and STAY BOLTS, Etc., Etc.

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The John Morrow Machine Screw Company, Limited,

INGERSOLL, ONTARIO

SADLER & HAWORTH

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OAK LEATHER BELTING

AND LACE LEATHER

DEALERS IN

GENERAL MILL SUPPLIES

MONTREAL
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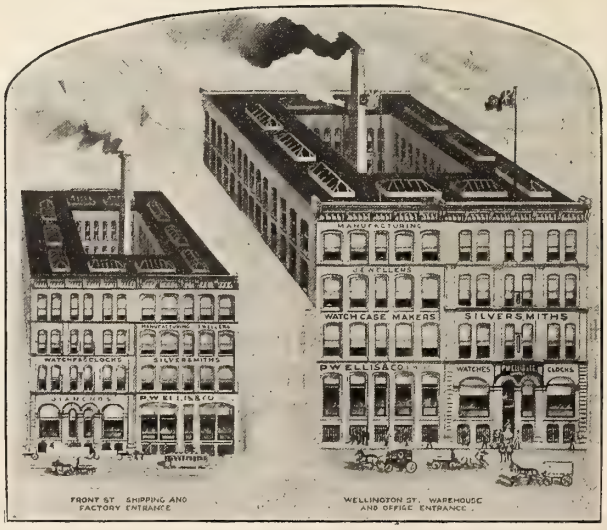
TORONTO
9 Jordan St.

P. W. ELLIS & CO. LIMITED, TORONTO, CANADA

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Gold and Silver Jewellery.
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Sterling Silver Toilet Novelties.
Gold and Silver Medals.
Society Jewels, Emblems and Class Pins.
Trophies, Tankards, Prize Cups, etc., etc.
Jewellers' Paper Boxes, also Plush, Leather, Velvet and Leatherette Cases for Jewellery and Silverware.
Jewellers' Show Case Trays, Silverware Chests, etc.



Fine Gold Jewellery Mounters, Solid Gold and Sterling Silver Watch Case Manufacturers.

STERLING SILVER SOUVENIRS
Exquisite hard enameled, hand painted Souvenirs, for any country in the World, of any prominent Building, Land Mark or Work of Nature (send photograph of special feature) that may be selected by the purchaser.

FACTORS and Wholesale Dealers in American and Foreign Watches, Watch Cases, Diamonds, Pearls and Precious Stones, Watchmakers' Tools and Materials; Jewellers' Machinery, Supplies, Sundries, etc. . . . . .

WE MANUFACTURE FOR CANADIAN AND EXPORT TRADE

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31, 33, 35, 37 Wellington Street East, Toronto.
Branch Office:
Canada Life Building, Montreal, Canada.

The Home of Reliable Silver Plate



FACTORY AND SHOWROOMS—HAYTER STREET, TORONTO

STANDARD SILVER CO. LTD. TORONTO, CANADA.
TRADE MARK

The Meaning of a Trade Mark

STANDARD SILVER CO. LTD. TORONTO, CANADA.
TRADE MARK

A Trade Mark may have value or it may not—it depends upon the quality of goods with which it is associated and the standing of the house behind it.

We intend that our Trade Mark shall ever be a guarantee of high quality. We believe that the Canadian Consumer desires the best that can be made and we are ambitious to supply his wants. Purchase Silverware with our Brand and you are assured of satisfaction.

Standard Silver Co.

LIMITED,

31 - 43 HAYTER STREET, TORONTO, CANADA

POLSON IRON WORKS

Toronto

MARINE ENGINES—Simple, Compound and Triple Expansion

STATIONARY ENGINES—Brown Automatic Type

Horizontal Tubular Boilers and Tank Work a Specialty

Steel Vessels and Dredges of all Sizes

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WORKS AT HAMILTON, ONTARIO

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Harvesting Machines

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International Harvester Company

OF AMERICA

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Canadian Branch Houses at Calgary, London, Montreal, Ottawa, Regina, St. John, Toronto and Winnipeg.

BRITISH COLUMBIA

THE VICTORIA "COLONIST"

Established 1858

Covers the entire Province of British Columbia (Branch Office in Vancouver). More "WANT" ads appear in the SUNDAY COLONIST than in any other paper west of Winnipeg.

The following is commended to the attention of advertisers looking for trade in B. C.:—

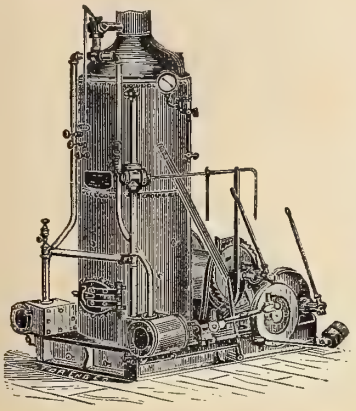
"Mr. Sarel, of the British Columbia Book Store (Vancouver), recently advertised in the Victoria COLONIST, the Vancouver News-Advertiser and an afternoon Vancouver paper in connection with the purchasing of a ranch. It has been ascertained by the COLONIST correspondent that the replies through the COLONIST were nine in number and more numerous than the other two papers combined."

Extract from a letter received from Vancouver correspondent of the COLONIST.

Daily, $5.00 per year. Semi-weekly, $1.00 per year.
Sample copies free.

M. BEATTY & SONS

WELLAND ONTARIO



Manufacturers of

DREDGES
DITCHERS
CLAM DERRICKS
COAL UNLOADING DERRICKS
STEAM SHOVELS
SUBMARINE ROCK DRILLING MACHINERY
MINE HOISTS
HOISTING ENGINES
STONE DERRICKS

Centrifugal Pumps for Drainage Works, Pumping Sand, Contractors' Use, &c.

AGENTS:

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E. LEONARD & SONS St. John, N.B.
STUART MACHINERY CO. Winnipeg, Man.
WM. HAMILTON M'F'G CO. Vancouver, B.C.
HOLME MILLER & CO. Dawson, Y.T.

Mention this Paper.

ENAMELLED WARE

OUR BRANDS

"CRESCENT" "COLONIAL" "PREMIER"



"VICTORIA" "BLUE and WHITE" "WHITE"

"STAR DECORATED"

Pressed, Pieced, Japanned and Lithographed

. . . TINWARE . . .

COPPER, SHEET IRON AND GALVANIZED WARES
OIL STOVES, TINNED SPOONS, LANTERNS,
WIRE GOODS, &c., &c.,

Catalogue on application to . . .

The Thos. Davidson Mfg. Co., Ltd.
MONTREAL



CEILING PLATE, No. 557



SKYLIGHTS



CEILING PLATE, No. 560

Sheet Metal Building Goods for Manufacturers.

WE MAKE A FULL VARIETY, INCLUDING—

Roofing.—Plain and ornamental for any construction.

Skylights.—From stock patterns or to any specification.

Sidings.—Embracing brick, stone, clap board and other designs.

Ventilators for every requirement.

Ceilings.—Beaded, crimped or ornamental patterns for offices, warehouses, fire protection purposes, etc.

Corrugated Sheets for roofing, siding, etc.

When you contemplate erecting new buildings, extending or repairing old ones, ask for our catalogue, and allow us to suggest where metal goods can be used to advantage.

We have supplied many prominent manufacturing firms in every part of the Dominion to their satisfaction, and you can use Metal Building Goods for many purposes to better advantage than any other material.

They are fire and lightning proof, durable and sanitary, and may be used so as to lend an attractive appearance to any building.

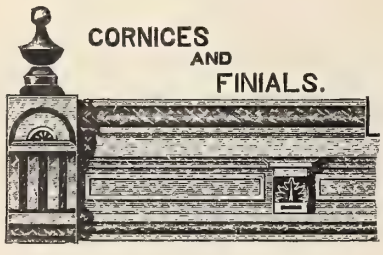
The Metal Shingle & Siding Co., LIMITED

Preston, Ont.

Western Agency:
ELLIS & GROGAN, Calgary.

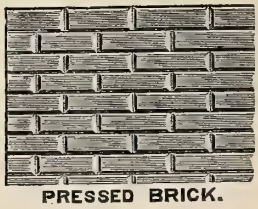
Manitoba Agency:
CLARE & BROCKEST, Winnipeg.

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PRESSED BRICK.

MILLAR'S

Royal Paragon Cheese

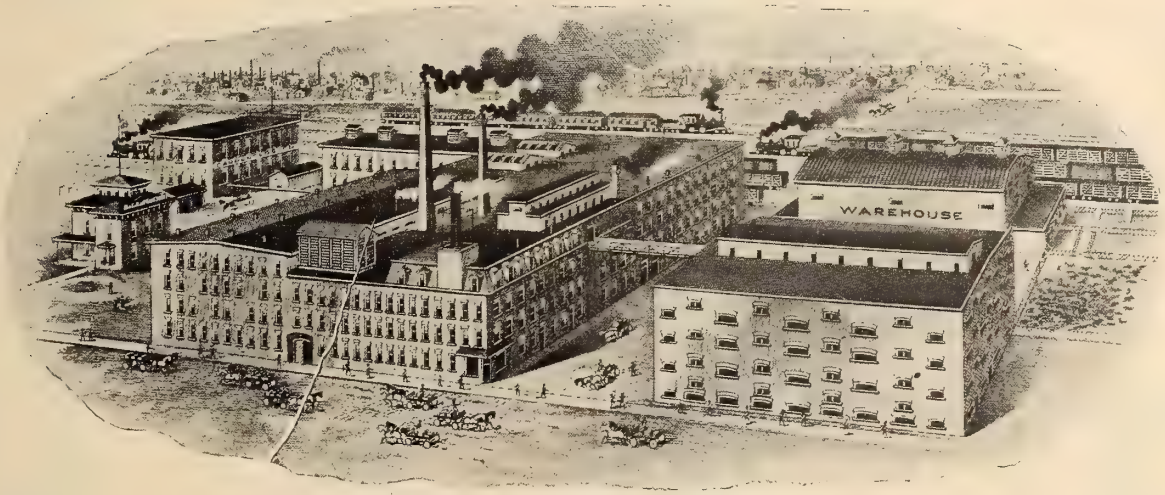


THE ORIGINAL CANADIAN CHEESE IN JARS

PURE, NUTRITIOUS, UNIFORM IN COLOR AND FLAVOR

MANUFACTURED BY

Ingersoll Packing Company



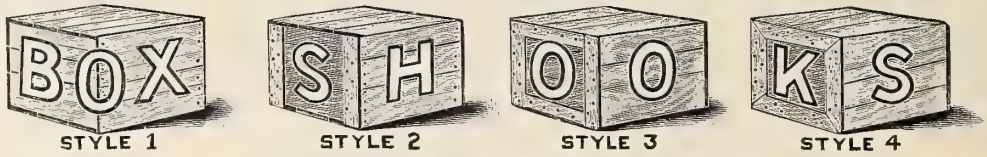
INGERSOLL PACKING CO'Y, INGERSOLL.

PORK PACKERS AND CHEESE EXPORTERS,
INGERSOLL ——— CANADA

PARRY SOUND LUMBER CO.

MANUFACTURERS OF

BAND-SAWED WHITE PINE LUMBER, LATHS, SHINGLES and



HEAD OFFICE: 74 HOME LIFE BUILDING, TORONTO, CANADA

WE USE LUMBERMAN'S CODE, ANGLO-AMERICAN 3rd EDITION

MILLS AT PARRY SOUND. CAPACITY: 25,000,000 FEET PER YEAR.

Advertisers are getting returns

from their advertising in "The Commercial." At least, they tell us so. So they should. "The Commercial" is almost the oldest trade newspaper in Canada; it reaches almost without exception all the responsible buyers in Manitoba, the Territories and British Columbia; it is published exclusively in the interest of these provinces. If you wish to reach the trade of the West this is the only medium which can give you the service that will bring results.

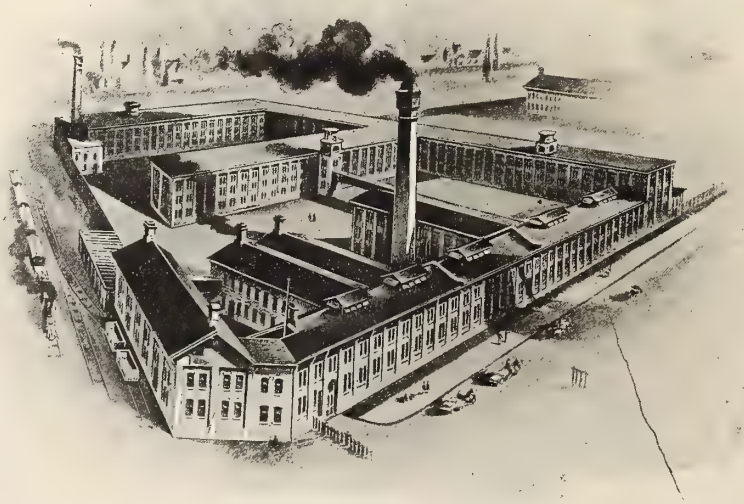
Established 1882
THE COMMERCIAL
The WEEKLY FINANCIAL, COMMERCIAL & GENERAL TRADE NEWSPAPER *of the* GREAT WEST.
WINNIPEG

HIGH GRADE RUBBER GOODS

(MADE IN CANADA)

BELTING
PACKINGS
VALVES
VALVE SHEET
TUBING
and
GASKETS

SUPERIOR .. IN .. QUALITY



RUBBER HOSE
—FOR—
WATER
SUCTION
STEAM
AIR
Fire Protection
ACIDS
BREWERS'
Pneumatic Tools

SATISFACTORY .. IN .. SERVICE

MALTESE CROSS BRAND

Sole Manufacturers of the celebrated "MALTESE CROSS" and "LION" Brands Rubbers.
The best fitting, best wearing and most stylish rubber footwear on the market.

SPECIAL ATTENTION GIVEN TO EXPORT ORDERS

LION BRAND

The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.

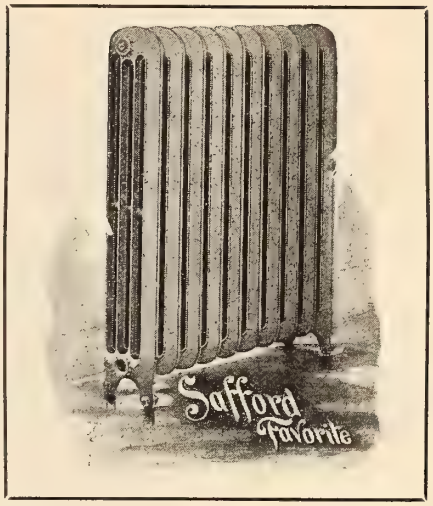
Branches:—MONTREAL, WINNIPEG.

Temporary Offices—15 East Wellington St., TORONTO, CANADA.

Safford Radiators

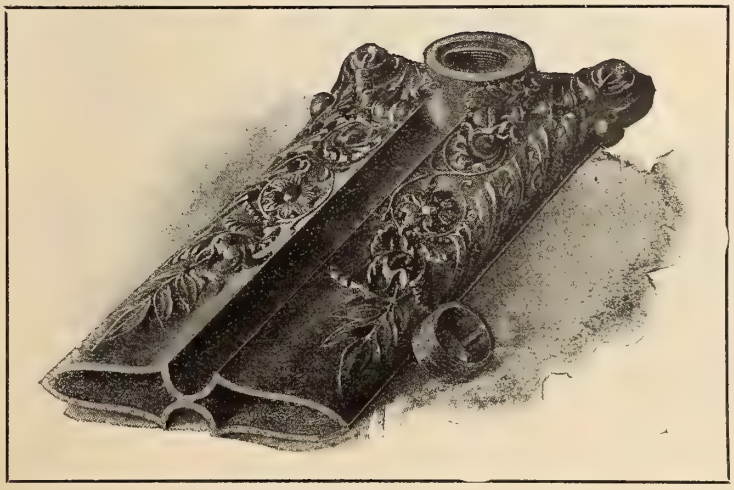
MADE IN CANADA

Each one is guaranteed by the largest radiator manufacturers in the British Empire —guaranteed to stand a pressure of 140 pounds to the square inch, almost double the pressure that any other radiator pretends to bear.



Guaranteed Absolutely Non-Leakable

There are no bolts, rods or packing used in their construction. Our own patent screw-threaded nipple connection—the best thing for safety that was ever invented—positively prevents leakage.



Safford Radiators are built in all designs for windows, curves, angles, and to go round columns. Send for illustrated catalogue. It will tell you all about them.

The Dominion Radiator Co., Limited

Head Office: Dufferin Street, TORONTO, ONT.

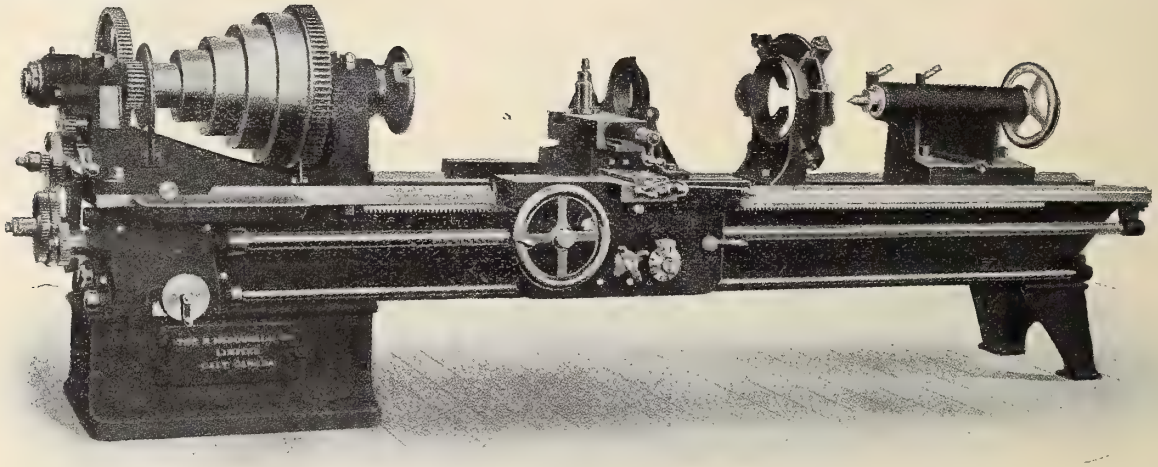
Branches:— Montreal Quebec St. John, N. B. Winnipeg Vancouver

Iron Working Machine Tools

Lathes and Planers

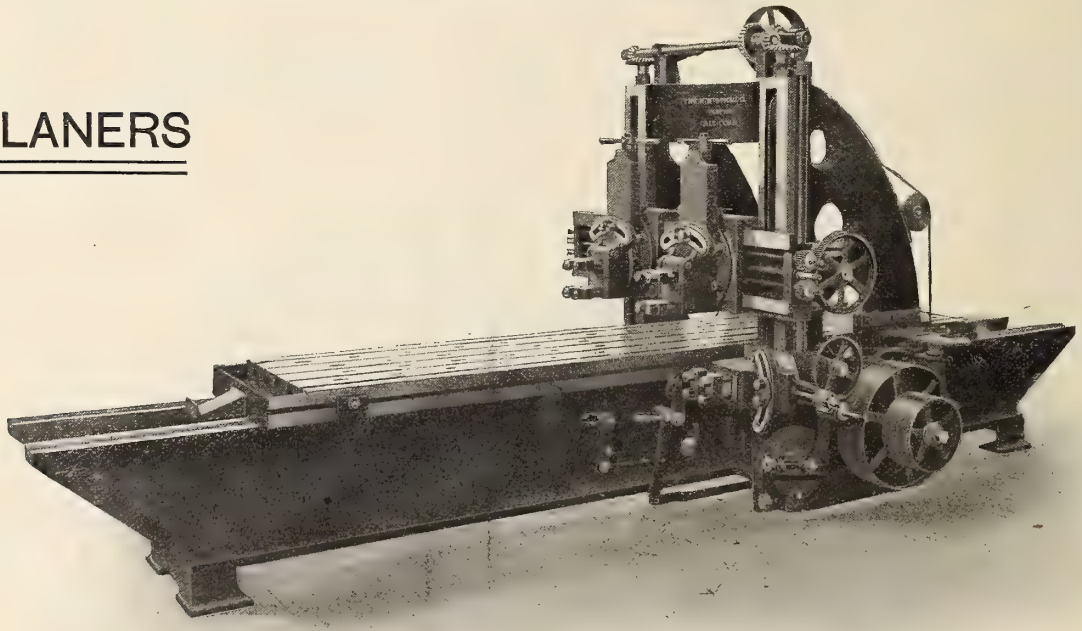
OF LATEST DESIGNS,
. . . ESPECIALLY . . .
ADAPTED FOR **HIGH SPEED SERVICE.**

OUR LATHES



SHOW FEATURES OF STRENGTH, RIGIDITY AND FINISH
UNSURPASSED BY ANY FOREIGN MAKERS.

OUR PLANERS



ARE BUILT TO TURN OUT THE MAXIMUM OF CORRECT WORK AND HAVE
ALL THE CONVENIENCES TO RENDER THE TOOLS POPULAR WITH USERS.

WE HAVE DESCRIPTIVE MATTER WHICH WE ARE PLEASED TO SEND ON REQUEST.

The R. McDougall Company, Limited,
GALT, CANADA.

RUBBER WANTS

When you want anything in the rubber line you should ask us.

Superiority of materials, compounds, machinery and workmanship give the reason.

BELTING HOSE VALVES PACKING HORSE SHOE PADS
MOULDED GOODS CARRIAGE GOODS DRUGGISTS' SUNDRIES
CEMENT, Etc., Etc.

ESTABLISHED OVER 50 YEARS

The Canadian Rubber Company
OF MONTREAL

Branches at Halifax, Montreal, Toronto, Winnipeg, Vancouver.

The Imperial Varnish and Color Company, Limited,

CABLE ADDRESS:— "IMVARCO."

MANUFACTURERS OF

HIGH-GRADE VARNISHES AND JAPANS

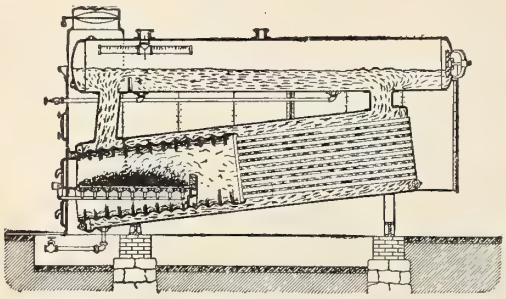
For CARRIAGE, RAILROAD, AGRICULTURAL, PIANO,
FURNITURE, LITHOGRAPHERS, ELECTRICAL,
DECORATORS AND HOUSEHOLD USES.
DRY COLORS, PASTE COLORS, FILLERS, STAINS, &c.

WRITE FOR SAMPLES AND PRICES.

OUR GOODS WEAR ON THE JOB, NOT OFF IT.

TORONTO, ONTARIO, CANADA.

Internal Furnace Saves 10 Per Cent.



An externally fired boiler wastes fuel because of the radiation of heat from the outside of the brick-work and the leakage of cold air above the fire, which causes a double loss by heating the excess of air and by producing imperfect combustion.

In a Robb-Mumford internally fired boiler the heat is transmitted directly to the water; and air cannot get into the furnace except through the regular drafts. This makes a saving of at least ten per cent.

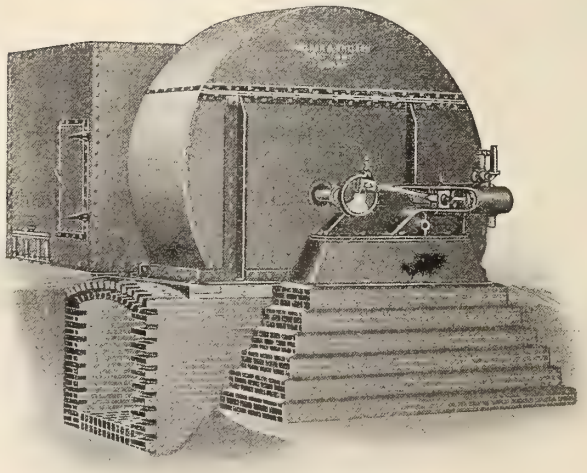
Robb Engineering Co., Ltd. Amherst, N.S.

AGENTS—Wm. McKay, 320 Ossington Avenue, TORONTO. Watson Jack & Company, Bell Telephone Building, MONTREAL.
J. F. Porter, 355 Carlton Street, WINNIPEG.

Sheldon & Sheldon

GALT, ONTARIO

Hot Blast Heating Systems, for Schools, Colleges, Public Buildings, Warehouses, Factories, Tanneries, Railway Shops, Car Sheds and Round Houses.



Mechanical Draft Systems for Boiler Plants, Power Houses, and Steam Ships.

Drying Systems of all Kinds and for all Materials.

Pneumatic Conveyors and Refuse Removers designed and installed.

HEATING AND VENTILATING ENGINEERS

WRITE FOR OUR SPECIAL CATALOGUES. PLANS AND ESTIMATES FURNISHED ON REQUEST.

Ratcliffe's Advertising Agency

ESTABLISHED 1849

1 Lombard Court, Lombard Street, LONDON, E.C.

SOLE ADVERTISEMENT CONTRACTORS FOR:—

"THE CHAMBER OF COMMERCE JOURNAL,"
The Official Organ of the London Chamber of Commerce.

Advertisements inserted in all British newspapers and magazines.
For cost of particulars apply to

RATCLIFFE ADVERTISING AGENCY,
1 Lombard Court, Lombard St., - LONDON, E.C.

A. KLIPSTEIN & CO.

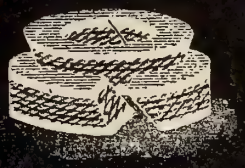
MONTREAL

CHEMICALS—	DYE STUFFS—	ANILINE COLORS—
Aniline Salts	Alizarines	Direct Cotton
Chlorate Potash & Soda	Hematines	Sulphur Dyes
Bleaching Powder	Logwood Extracts	Victoria Blues
Barium Chloride	Fustic Extracts	
Hyposulphite Soda		
Quebracho		
Yellow Prussiates Potash & Soda		
Sulphate of Alumina, China Clay		

AURAMINES RHODAMINES TARTRAZINE

SPECIALTIES—Sulphur Black and Fast Chrome Wool Blacks

Stock at 17 Lemoine Street, Montreal



ENGINE PACKINGS.

We carry a large stock of all the STANDARD PACKINGS.

COLD WATER SWEATING PIPES are remedied by our SPECIAL COVERING.

EUREKA MINERAL WOOL & ASBESTOS CO.

Montreal Branch: 389 St. James Street. 74 York Street, TORONTO.

PUDDINGTON'S PATENT FUEL SAVER

WILL SAVE YOUR COAL AND PREVENT SMOKE. PERFECT SATISFACTION GUARANTEED.

The Smokeless Fuel Saving System Limited

158 BAY STREET, TORONTO.

PAID UP CAPITAL, $100,000. Send for Booklet.

The Pride of the Paper Trade

This water-mark on each sheet

FOR LETTER HEADS &c.

SUPERFINE LINEN RECORD

FOR ACCOUNT BOOKS

MADE IN CANADA
—BY—
THE ROLLAND PAPER CO.
HIGH GRADE PAPER MAKERS

Canadian Heating & Ventilating Co., Ltd.

OWEN SOUND, ONT.



The Empire Queen.

You Can Sell the Empire Queen Range

There is not a woman who knows anything about a stove but what will approve of

The Empire Queen Range

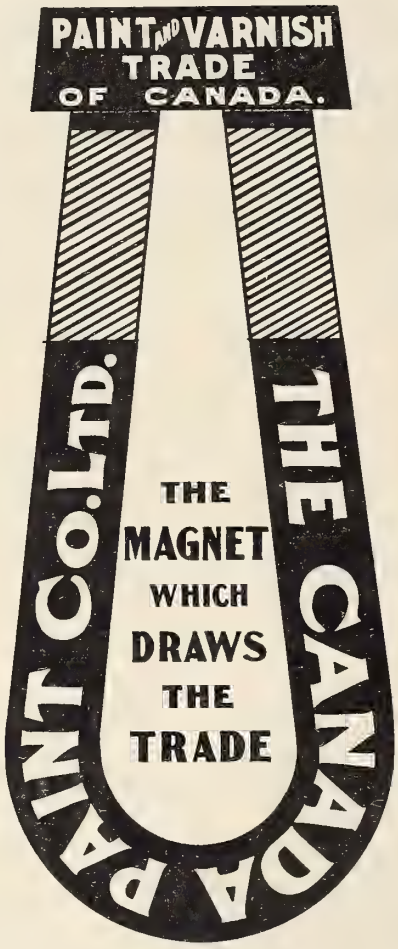
It is built for business—easy to clean, looks well, is easy on fuel, draft arrangements are perfect, making it a rapid cooker.

Send for Descriptive Booklet and Price List.

SPECIAL ATTENTION

To ORDERS from

MANUFACTURERS!



Address

. . THE . .

CANADA PAINT COMPANY

LIMITED

MONTREAL or TORONTO.

E. LEONARD & SONS

LONDON, - CANADA

MANUFACTURERS OF

ENGINES and BOILERS

Leonard Corliss Girder Frame; Leonard Corliss Heavy Duty Frame; of new and improved patterns, double ported valves. The Peerless Self-oiling Engine; Simple and Tandem Compound. The Leonard Ball Automatic Engine. Tangye, Clipper and Leonard Engines in many sizes. Standard Stationary Boilers. Scotch Return Corrugated Flue Boilers. Eclipse Return Tubular Boilers, with the fire-brick furnace. Lancashire Boilers. Locomotive and Upright Boilers in great variety. Economic Boiler Pressure and Open Exhaust Heaters. Steam Pumps for Boiler feeding, and all goods incidental to the Engine and Boiler plant.

—Agencies at—

Montreal, Que. St. John, N.B.
Winnipeg, Man. Toronto, Ont.

THE QUEEN CITY OIL COMPANY LIMITED

Head Office: TORONTO.

PHONE MAIN 3955. KING & YONGE STS.

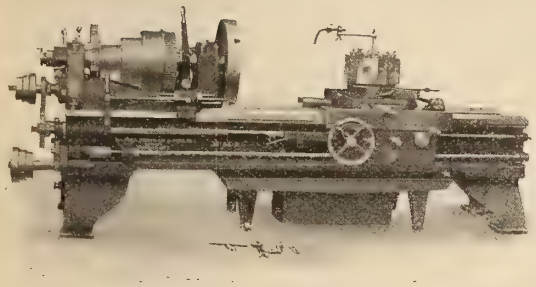
—BRANCH OFFICES AT—

	Phone		Phone
Ottawa -	514	Brantford -	210
London - -	1240	Brockville - -	105
Hamilton -	97	Owen Sound -	123
Kingston - -	45	Petrolea - -	22
Belleville -	67	Port Hope -	22
Berlin - -	180	Stratford - -	123

PURE { TURPENTINE and LINSEED OIL

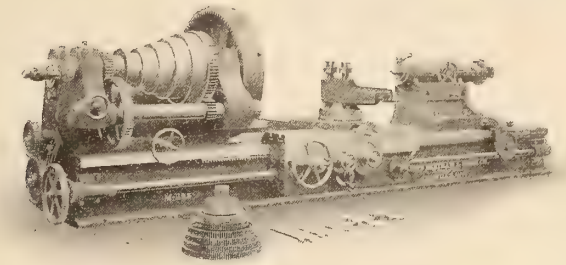
BEST . . . { BENZINE and GASOLINES
LUBRICATING OILS & GREASES
PARAFFINE WAX CANDLES

BERTRAM'S Heavy Machine Tools
OF MOST MODERN TYPE



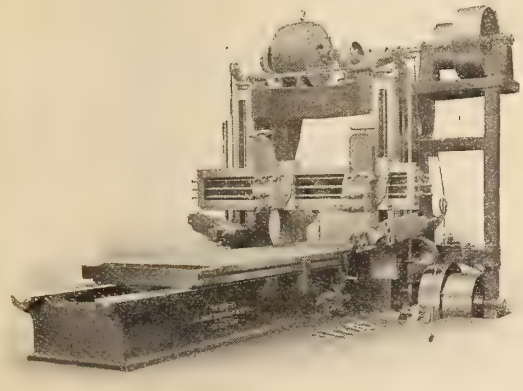
24 INCH FRICTION HEAD TURRET LATHE

With automatic stop, which is one of a large line of Turret Lathes we manufacture.



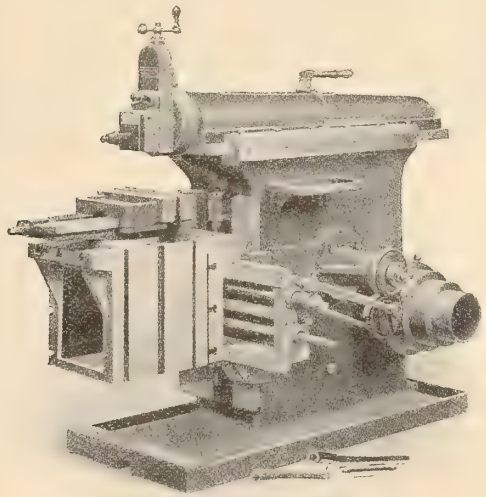
STANDARD ENGINE LATHES

12 to 72 inch swing
Design—Highest type of modern construction
Operation—Simple and convenient Belt or motor drive



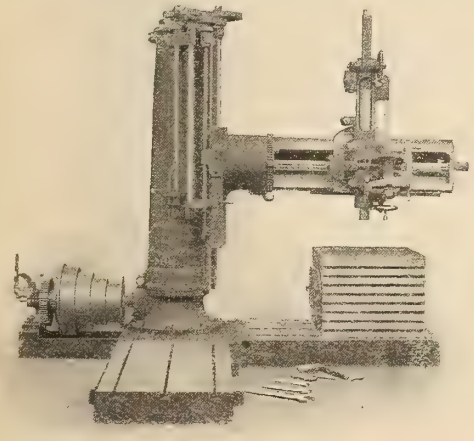
SPUR AND SPIRAL GEAR PLANERS

24 inches to 96 inches wide. Constructed with heavy beds, tables, housings, etc., giving exceptional solidity and capacity for heavy work.



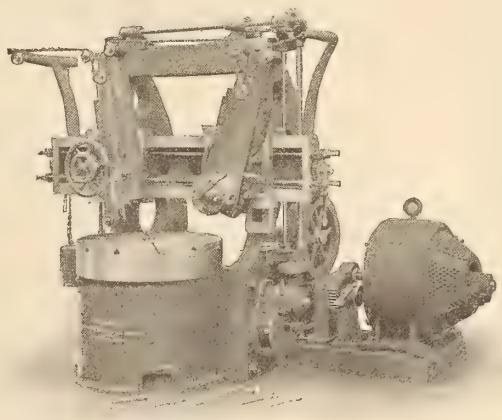
CRANK OR GEAR DRIVEN SHAPERS

16, 20, 24 inch stroke. Single or back-geared, with extension base.
Design—Powerful and heavy. Operation—Simple and rapid.
Stroke Four to eight rates of speed.



RADIAL DRILLING MACHINES

4, 5, 6 and 7 foot arms. Plain, Half and Full Universal.
Belt or motor drive.



BORING AND TURNING MILLS

From 37 inches to 14 feet wide.
The above illustration shows our 37 inch Boring Mill with motor drive.

The JOHN BERTRAM & SONS CO., Limited, - - DUNDAS, ONT., CANADA.

OFFICES — Vancouver, B.C. Winnipeg, Man. Toronto, Ont. Montreal, Que.



Pedlar's "Perfect" METAL LATH

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows :

26 gauge, 10c. per sq. yard.
24 gauge, 13c. per sq. yard.
F. O. B., Oshawa.
(Oshawa rate same as from Toronto)

Discount to dealers only. Our lath mill is now in full operation, and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

Pedlar People, Oshawa, Can.
or 767 Craig Street, Montreal, Que.

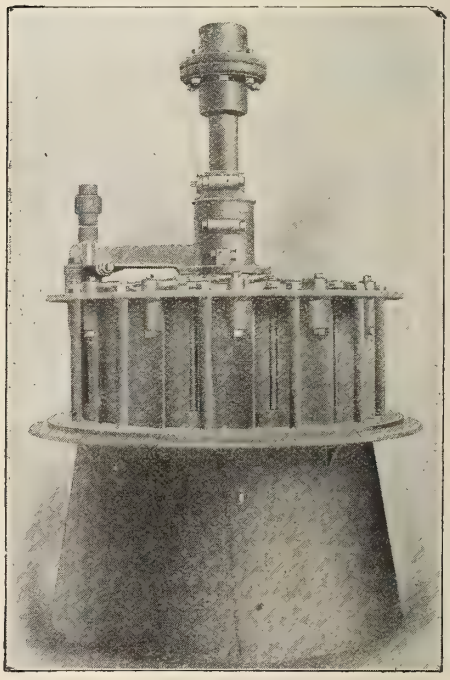
SAMSON BALANCED GATES

When selecting a turbine it is very important to understand the character and operation of its gates.

Our **SAMSON** combines improvements in the proportion and adjustment of its gates insuring an almost perfect balance, enabling them to be operated easily, and with a small amount of power.

These improvements prevent serious wear on the cogging and moving parts, require less strength and weight in the parts themselves, and afford quick movement of gates by hand, and splendid regulation by a governor.

If you have a water power you wish to develop or improve, write us.



THE
Wm. Hamilton Mfg. Co.
LIMITED
PETERBOROUGH, ONT.
Branch Office - - - VANCOUVER, B.C.



Consolidation Freight Locomotive

BUILT FOR

The Canadian Pacific Railway

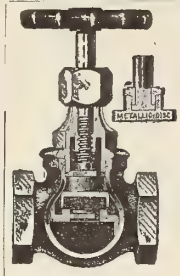
BY

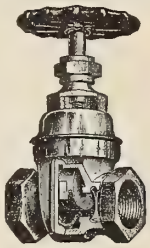
The

Canadian Locomotive Company, Limited,

KINGSTON, ONTARIO

Builders of Simple and Compound Locomotives adapted to every variety of service.





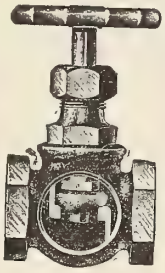
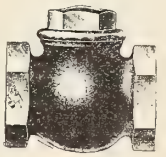

EVERY MANUFACTURER

is more or less interested in good valves.

KERR'S VALVES

are known to all large users as being of a distinctly high grade.

Do you use them? Have you used them? If you are not using them, will you give a strictly honest made CANADIAN VALVE a trial? All large dealers stock them.



The Kerr Engine Company, Limited

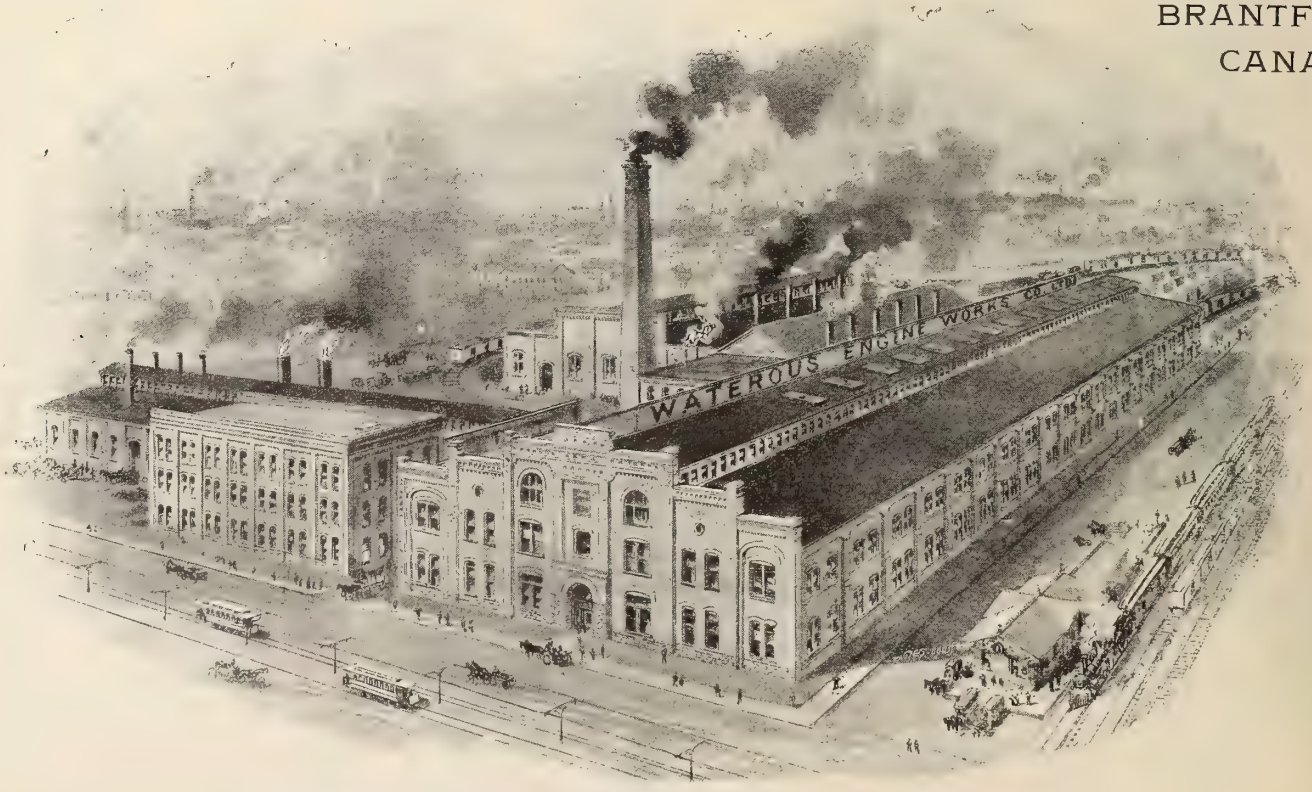
MANUFACTURERS,

SEND FOR CATALOG.

WALKERVILLE, ONTARIO, CANADA

THE WATEROUS ENGINE WORKS CO.

LIMITED,
BRANTFORD
CANADA



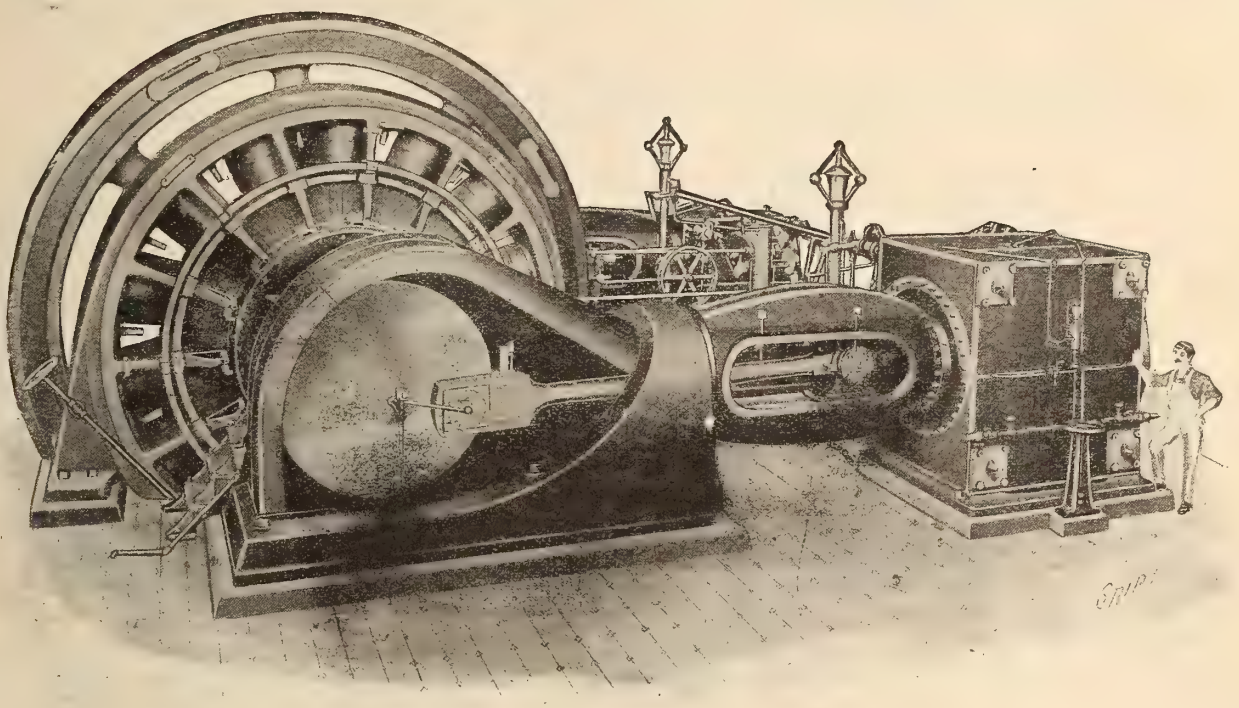
MANUFACTURERS OF A LARGE VARIETY OF MACHINERY

A FEW LINES . Saw Mill Machinery ·.· Pulp Wood Machinery ·.· Engines and Boilers ·.· Fire Apparatus, etc.

Laurie Engine Company

MONTREAL CANADA

"The Laurie Corliss Engine is the most satisfactory and efficient power in the world."



Heavy Duty Horizontal Cross-Compound Laurie Corliss Engine

GET BULLETIN No. 26

WE BUILD

Corliss Engines, Rival Medium-Speed Engines, Patent Feed Water Heaters and Purifiers, Triplex Power Pumps, Wood Pulp Grinders, Rock and Ore Crushers, Cyclone Pulverizers, Corrugated and Plain Rolls, Hangers, Rigid Pillow Blocks, Safety Collars, Shaw Compression Couplings, Standard Flange Couplings, All Kinds and Sizes of Pulleys, also Engine Flywheels and Grooved Wheels for Rope Transmission.

LAURIE ENGINE COMPANY

HALIFAX TORONTO WINNIPEG VANCOUVER

Montreal Steel Works

LIMITED

STEEL CASTINGS BY THE ACID OPEN HEARTH SYSTEM UP TO ANY WEIGHT

Springs, Switches, Frogs

CROSSINGS, SIGNALS, Etc., FOR STEAM and ELECTRIC RAILWAYS

AGENTS FOR CANADA

For Thos. Firth's & Sons Celebrated Tool Steels

CANAL BANK, PT. ST. CHARLES, MONTREAL.



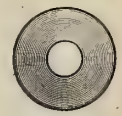
TORONTO HAMILTON MONTREAL



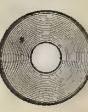
WOOD SCREWS, *Machine Screws, Nuts,*



Stove Bolts, Tire Bolts, Rivets, Burrs,



Wire in Coils and Straight Lengths

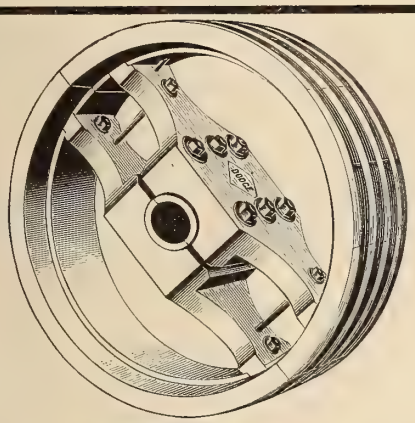


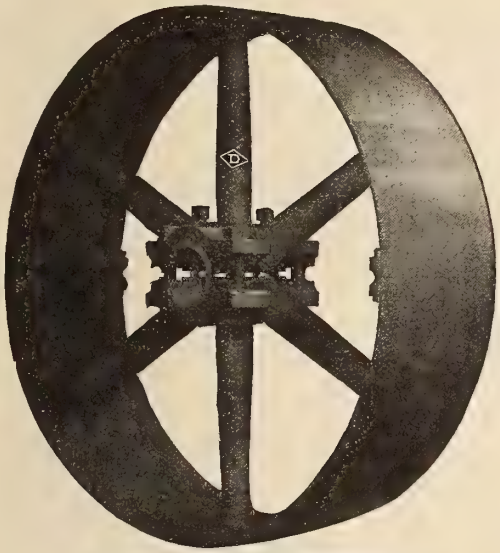
WIRE NAILS, BRIGHT WIRE GOODS

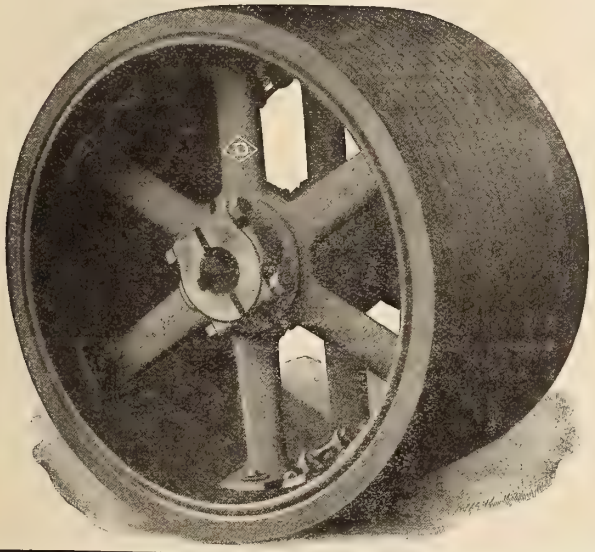
We have exceptional facilities for making Special Threaded Wire Goods

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NOVEMBER, 1904

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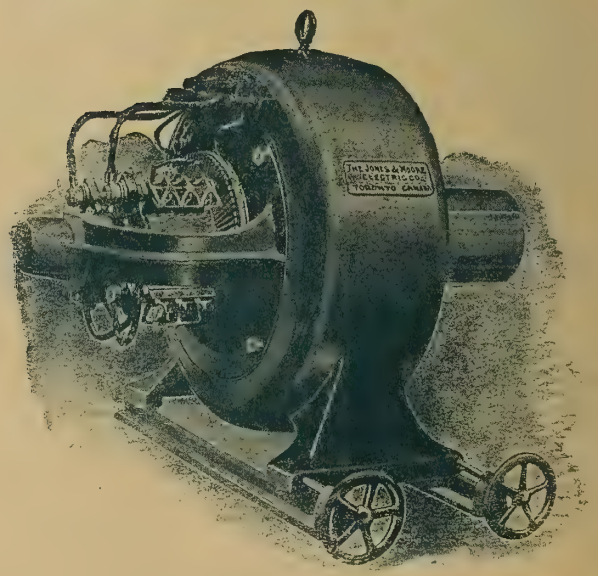
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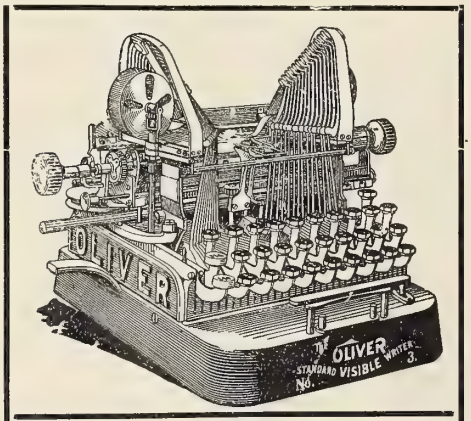
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Vol. V. TORONTO, NOVEMBER, 1904. No. 4

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association, and devoted to the advancement of the commercial prosperity of Canada.

INDUSTRIAL CANADA circulates to

1. All Members of the Canadian Manufacturers' Association.
2. The British Consuls, the world over.
3. Chambers of Commerce in the United Kingdom.
4. Foreign and home exchanges.
5. Miscellaneous subscribers at home and abroad.

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(Incorporated)
Head Office, Toronto, Canada.

THE COMING TARIFF REVISION

THE Laurier Government having been returned to power we may expect that an investigation will be immediately begun with a view to revising the tariff along the lines proposed by Mr. Fielding in his last budget speech and reaffirmed by Sir Wilfrid Laurier and the Liberal candidates in general during the recent election campaign. That is we are to have a maximum tariff on goods imported from high tariff foreign countries, a minimum tariff on goods imported from low tariff foreign countries and then below that the British preferential tariff. It is exceedingly important that in this revision of the tariff the lowest duties, viz., those levied upon goods of British manufacture shall not be too low. Up to the present time it has been customary to refer to the duties imposed under the preferential clause of the tariff as the minimum duties. But Mr. Fielding's proposed minimum and maximum tariff is something quite apart from this. In explaining his proposal he said there would be a maximum tariff, a minimum tariff and then below that a British preferential tariff. The business man who is asked how high the duties should be must bear in mind the fact that the so-called minimum tariff will not actually be the minimum tariff, for the British preferential cut must come off below that again. The maximum tariff must necessarily be very much higher than any tariff Canada has yet had in order to allow of two cuts. If it is not the protection will be altogether inadequate. In this revision the crucial point to Canadian manufacturers will be the duties levied upon goods of British manufacture and unless our manufacturers can be adequately protected against those of the Mother Country, with its superior facilities, lower interest and lower wages, any arrangement will fail to accomplish real good to Canada.

It was agreed by the politicians on both sides of the House last session that in recent years Parliament had been called too late and its sittings have consequently been prolonged late into the summer. The intention evidently is to open earlier next time and it is therefore important that no time should be lost in starting the tariff enquiry in order that the Government may be able to present the new tariff early in the session.

WOULD MAKE PROTECTION UNPOPULAR

THE Dumping Clause of the Fielding Tariff Act of 1904 is a purely protectionist measure. Mr. Fielding, in introducing it did not pretend that it was designed for any other purpose than to give protection to Canadian industries. There was no pretext that while it might incidentally protect Canadian industries, its chief object was to provide revenue. There was never introduced in any legislative body in the world a measure whose aim was more unqualifiedly protective; and yet, if it were generally accepted as representing the views of protectionists, it might do more harm to the cause than any measure ever devised by Canadian opponents of protection. A policy that causes continual annoyance to almost every business man in the country cannot be long maintained, and that is what the Dumping Clause is likely to do. The great majority of business men, whether manufacturers or merchants, require to import some of the articles they use or sell. This is true in the most highly protected countries as well as in the low tariff countries. Every business man, therefore, is interested in having a tariff law that can be easily understood and administered with fair and equal treatment for all importers. From the business man's standpoint it does not matter so much how high the duty is, if he knows beforehand exactly what he has to pay, and is sure that all his competitors must pay exactly the same as he does. The Dumping Law upsets all the calculations of the business man. With this system of protection in force he can seldom tell what duty he will have to pay on imported articles until the decision of the customs officer has been given. He cannot be sure that some rival merchant will not get better terms than he does. Not only will dishonest importers be able to evade the law, but honest merchants who have conscientiously given what they regarded as the true valuation will frequently be suspected of fraud. This system of protection will prove so harassing, that if protectionists are held to be responsible for it, there will be developed a hostile public sentiment which cannot be overcome for many years. Consequently, even those industries

NOTICES

Executive Council, Canadian Manufacturers' Association, regular monthly meeting, Board of Trade Building, Toronto, Thursday, November 24th, at 2 p.m.

Toronto Branch, regular monthly meeting, Board of Trade Building, Toronto, November 10th, at 2 p.m.

Montreal Branch, regular monthly meeting, Board of Trade Building, Montreal, November 10th, at 2.30 p.m.

which are temporarily benefited by the Dumping Clause should use their influence to have reasonable specific duties substituted for it.

WITH GOOD INTENTIONS

THERE is no doubt that the Dumping Clause was adopted by the Laurier Government with good intentions. The unfair competition to which Canadian manufacturers are exposed was recognized, and there was a genuine desire to provide a remedy that would satisfy the manufacturers without antagonizing those who have a prejudice against protection as a fixed policy. Unfortunately it is so difficult for customs officers to administer it fairly and impartially, that it is more likely to excite active antagonism than a genuine policy of protection would do. The opposition to protection in this country is now purely academic. The great majority of the people believe in the principle of protection, and most of those who don't believe in it recognize that they must yield to popular sentiment. Consequently a genuine policy of adequate protection for all Canadian industries would cost the party adopting it the loss of very few votes. On the other hand, the Dumping Clause, which was designed to give protection to manufacturers without offending the free traders, is likely to make a large class of the business community intensely antagonistic to any Government which maintains it, because it will cause continual annoyance and inconvenience owing to the uncertainty that must attend it.

It is worthy of note, that although the Dumping Clause is avowedly a protective measure, no one objects to it because of its protective features. The objection is simply that it is unworkable and causes needless annoyance to importers. The German surtax is an aggressively protective measure, yet it is almost universally approved by Canadians. No voice seems to have been raised in opposition to the recent increase of duties on woollens. The experience of the Laurier Government should convince every politician that there is no public opinion against protection.

OPINION OF TWO INDEPENDENT PAPERS

THE *Montreal Witness*, an independent Liberal newspaper whose influence has always been exerted in favor of the Laurier Government, says: "The dumping duties are immoral because they encourage lying and every other form of dishonesty." *The Hamilton Herald*, an independent newspaper which, while not so closely allied to the Liberals as the *Montreal Witness*, has always been exceedingly friendly to the Laurier Government, says in reference to the Dumping Clause:—

"Are the dumping duties practicable? Do they accomplish what they are designed to accomplish? Do they work fairly to all importers alike? These are the important questions. In the *Herald's* judgment these questions must be answered in the negative. The dumping duties are not practicable because they can so easily be evaded. They are not doing what they were intended to do, because they are not preventing dumping. They do not work fairly, because too much is left to the judgment and knowledge of customs officials, so that goods may be entered at one port at a lower rate of duty than at another port, thus giving some importers an unfair advantage over others. The best way to prevent the slaughter of foreign goods in Canada is to be found in a larger measure of all-round protection. Specific duties will do it. Mr. Fielding has promised to provide a better remedy for the dumping evil if the plan which he introduced last season doesn't work well. He is sure to be reminded of his promise."

MANUFACTURERS SHOULD HELP EACH OTHER

THERE are many ways in which Canadian manufacturers can help each other. First of all, every manufacturer should make it a principle never to buy anything abroad if he can get an article as good and as cheap made in Canada. It may sometimes happen that an article purchased by one Canadian manufacturer from another has some defect. The purchaser can help his fellow manufacturer by pointing out the defect in a kindly way and giving him a chance to remedy it. Too often, instead of doing this, the next order is given to some foreign manufacturer.

Canadian manufacturers, with few exceptions, have shown a disposition to cordially co-operate in favor of tariff revision irrespective of party affiliations. There are, however, a few manufacturers who, having secured sufficient protection for their own industries, do not care whether other manufacturers get adequate protection or not. They are very short-sighted in their selfishness. They do not see that each manufacturing industry established in the country, directly or indirectly, makes work for other industries. Each manufacturer has the same interest in helping his fellow manufacturers to get proper protection that the merchant or the farmer has. The establishment of a great variety of new industries in the country or the extension of old ones creates an extra demand for many different kinds of manufactured goods, as well as for farm products, groceries, etc. A furniture manufacturer, for instance, might say to a woollen manufacturer who asked him for assistance in urging the Government to grant more protection: "I have enough to do to look after my own interests. It makes no difference to me whether you get protection or not." But the woollen manufacturer could reply: "It makes a very great difference to you and every other furniture manufacturer whether the woollen manufacturers have protection or not. Not only the workmen employed by the woollen manufacturers, but the grocers, butchers, bakers, tailors, and other tradesmen from whom they get their supplies all buy furniture. If the woollen manufacturers are driven out of business their workmen will have to seek employment in the United States, and the tradesmen who have been supplying them with all the necessaries of life will, in many cases, be ruined. On the other hand, an extension of the woollen industry, giving employment to more workmen, would create an extra demand for furniture."

What is true of the woollen industry is true of every other industry to a greater or less extent.

THE COST OF THE PHILIPPINES

THERE is a dispute between Republicans and Democrats in the United States as to how much the Philippines have cost. Judge Parker, the Democratic candidate, declares that in addition to paying twenty million dollars to Spain for these islands, the Republicans have expended $650,000,000 of the people's money and sacrificed over 200,000 lives in conquering the Filipinos. The Republicans say that this is a gross exaggeration as it is well known that the actual cost including the twenty million dollars paid to Spain was only $294,190,000 up to June 30, 1904. To this the Democrats reply that it may be true that the actual war expenditure in the Philippines is no greater than the Republicans state, yet there has been an enormous increase in the general army and navy expenditure that would not have been considered necessary if the United States Government had not adopted the policy of territorial expansion.

Accepting the Republican estimate of about two hundred million dollars as accurate, that seems a large amount to pay for those distant islands and the end is not yet, for the people of the Philippines still hate their conquerers. Yet many thoughtful men in the United States believe that all the money expended will be returned with interest in the form of increased trade within a few years.

If the Philippines are worth so much to the United States, how much are the British West India Islands worth to Canada? It is not necessary to send an army to conquer these colonies in order to make them tributary to Canada. They are part of the same Empire and their people are law-abiding, patriotic British citizens. Would it not be worth while to spend a little money peacefully to bind these colonies to Canada by ties of self-interest?

The greatest obstacle to the expansion of trade between Canada and the British West Indies is the inadequate steamship service. A good service cannot be secured without a generous subsidy, but this is one way in which our Government may spend money for the general advantage of Canada. As already pointed out in INDUSTRIAL CANADA there is no reason why absolute free trade should not exist between Canada and the British West Indies except that it would temporarily mean some loss of revenue. Here is an opportunity for Canadian politicians to please the free trade element of our population without displeasing the protectionists. Unrestricted reciprocity between Canada and the British West Indies would injure no Canadian interest while it would do much to develop Canadian commerce, especially from the ports of the Maritime Provinces.

DEVELOP OUR NORTH LAND

IT is rather humiliating for a great province like Ontario with many millions of acres of unoccupied lands to have to submit to a reduction in Parliamentary representation because the increase of population is slower than in other sections of the Dominion. The representatives of the people, both in the Parliament at Ottawa and the Legislature at Toronto, should insist upon the Dominion and Provincial Governments taking active measures to promote the settlement of Northern Ontario. We have probably in this province between the Height of Land and James Bay as much, or nearly as much, good agricultural land as we have south of the Height of Land. There are in all probability valuable minerals, and geologists say there may be good coal there, although they have always insisted very positively that coal could not possibly be discovered in Old Ontario. Moose Factory on James Bay, at the extreme north of the province, is farther south than London, England. Of course it has not the same climate as London, but its winters are no colder than those of Winnipeg, Man. The province of Ontario is larger than Germany, and probably has greater natural resources than Germany. No part of the province is too cold for settlement. Ontario is capable of supporting at least forty million people. Yet there is grave danger that we may have to submit to another reduction in our Parliamentary representation after the next census, unless active measures are taken to settle the unoccupied lands.

The rapid settlement of our Northwest is now assured, and with adequate protection that market will be of immense value to our manufacturers, but half a million people in Northern Ontario would make better customers for Eastern manufacturers than the same number of people scattered over the vast Northwest. There are great manufacturing cities in the Western States which have an advantage in distance over the manufacturers of Ontario, Quebec and the Maritime Provinces, and the extra cost of transportation which our manufacturers have to pay largely offsets the tariff. Then it must be expected that if we make our tariff high enough great manufacturing industries will be established in our own Northwest within a few years. But if there were a large population of farmers in Northern Ontario and Northern Quebec, our Eastern manufacturers would have an advantage over all competitors in supplying them with manufactured goods.

THE ASSOCIATION AND INSURANCE

THE Executive Council of the Manufacturers' Association at their October meeting decided to appoint a Fire Insurance Committee of twenty-one members that will be representative of the industries and of the different provinces of the Dominion.

This Committee will be made up of ten representatives from Toronto, four from Montreal and one from each of the cities of Halifax, St. John, Quebec, Hamilton, London, Winnipeg and Vancouver. The President of the Association, the First Vice-President, the Provincial Vice-Presidents and Treasurer will be *ex-officio* members of the Committee.

This Committee will decide on a plan for improving the present Fire Insurance conditions and make definite recommendations to the Executive Council. There are not enough insurance companies in Canada. The rates in many cases are excessive. The expenses of securing business are greater than is necessary. There is no proper system of inspection. There is a lack of harmony between the companies and the policy holders. These conditions are the growth of several years of prosperity and consequent indifference to conditions. The remedy should have been applied as the fault arose and the present situation averted. If the Committee are able to apply any remedy that will tend to improve any of the above their time and efforts will have been well spent.

There are at least two courses of action open to the Committee :—

(*1*) To organize a company. This would at once provide additional insurance facilities and the expenses necessary to secure business could be reduced. Propositions made by responsible parties are before the Association offering reinsurance treaties which would enable the Association to underwrite comparatively large blocks of insurance.

(*2*) To organize an insurance department that would handle the insurance of the members of the Association, receive the commissions and rebate to the members whatever was received over and above sufficient to pay running expenses.

The first meeting of the new Committee will be held in November, and an announcement of the action decided upon will be awaited with much interest.

FIRE INSURANCE FACTS

DETAILS have recently been published by the Inspector of Insurance for Ontario and the Superintendent of Insurance for the Dominion, regarding the statements of the Provincial and Dominion Fire insurance Companies for the year ending December 31st, 1903.

There are thirty-six Companies licensed by the Dominion ; eight United States, nine Canadian, and nineteen British. These companies in 1903 carried insurance amounting to $933,247,764 : United States Companies $136,050,121, Canadian Companies $216,505,990, British Companies $580,718,653. The companies carried an average risk of $25,645,771.

In Ontario there are three stock and eighty-four mutual companies. These carry insurance amounting to $212,146,914.

The Mutual Insurance in the Province reaches the high total of $195,686,859, a figure much in excess of what is generally understood.

The amount of insurance carried in Dominion companies in 1903 was $41,224,878 in excess of that carried in 1902. This is 1½ times the average amount carried by a single company. In the same year the gross premiums increased $827,678. This figure is 2.51 times as great as the average premium of the companies.

From 1869 to 1903 the losses of Dominion companies have amounted to 66.99% of the premium income. For 1903 they amounted to 51.57% of the income of $5,870,716.

From 1879 to 1903 the premium income has amounted to $114,426,203 ; the losses to $78,239,019 ; and the expenses and profits to $36,187,184. This last figure equals 45.1% of losses and 33% of income.

The average rate of premium has increased from $1.23 per $100 in 1899 to $1.50 in 1903. The premiums in the different years have averaged $1.23, $1.25, $1.42, $1.47, and $1.50.

Five Canadian companies have foreign agencies. The premium income received from such sources in 1903 amounted to $3,876,273, which is over twice the premium received by the same companies on Canadian business. The Canadian business is the more profitable, 61.10% of premiums being distributed for losses, while it takes 64.86% of premiums to pay losses on foreign business.

Executive Council

OCTOBER MEETING

Large Attendance of the New Executive — Threshing Machine Section Formed — Excursion to Great Britain Discussed — East and West-bound Rates should be made Uniform — Representatives to the Trades and Labor Conference.

THE first regular meeting of the new Executive Council of the Canadian Manufacturers' Association was held in the Council Chamber, Board of Trade Building, on Thursday, Oct. 20th, 1904, at 2 p.m.

The President, Mr. W. K. George, of Toronto, presided and the following other gentlemen were present :—Messrs. C. C. Ballantyne, Montreal ; Geo. Booth, Toronto ; P. H. Burton, Toronto ; Robt. Crean, Toronto ; R. A. Donald, Toronto ; L. V. Dusseau, Toronto ; Geo. D. Forbes, Hespeler ; Jas. Goldie, Guelph ; W. P. Gundy, Toronto ; Lloyd Harris, Brantford ; E. G. Henderson, Windsor ; J. Hewton, Kingston ; D. W. Karn, Woodstock ; R. O. McCulloch, Galt ; J. J. McGill, Montreal ; D. T. McIntosh, Toronto ; J. S. McKinnon, Toronto ; R. McLaughlin, Oshawa ; W. K. McNaught, Toronto ; Robt. Munro, Montreal ; J. P. Murray, Toronto ; F. B. Polson, Toronto ; A. S. Rogers, Toronto ; W. B. Rogers, Toronto ; A. F. Rutter, Toronto ; J. T. Sheridan, Toronto ; T. H. Smallman, London ; J. M. Taylor, Guelph ; A. W. Thomas, Toronto ; J. O. Thorn, Toronto ; E. V. Tillson, Tillsonburg ; W. B. Tindall, Toronto ; R. L. Torrance, Guelph ; C. R. H. Warnock, Galt ; S. M. Wickett, Toronto ; R. C. Wilkins, Montreal.

In opening the meeting the President expressed his pleasure at seeing such a large representation and spoke in optimistic terms of the prospects for the year's work.

Communications were received as follows :—

(*a*) From members unable to be present :—Messrs. Geo. E. Drummond, Geo. E. Amyot, P. W. Ellis, Jas. Maxwell, J. B. Henderson, Jas. Pender, W. R. Landon, C. Turnbull, Col. J. H. Burland, Henry Wright, C. Riordan.

(*b*) From the Hon. R. H. McCarthy extending his thanks to the Executive Council and the Officers of the Association for their kindness to him during his recent visit.

(*c*) From Mr. C. H. Burrows, of Brockville, asking that owing to ill-health his resignation as a member of the Council should be accepted. It was moved by Mr. J. O. Thorn, seconded by Mr. J. M. Taylor, that Mr. Burrows' resignation be accepted and that Mr. H. Cockshutt of Brantford be appointed a member of the Council in his place. Great regret was expressed that Mr. Burrows' resignation had been rendered necessary and the hope recorded that he might soon be quite recovered.

The reports of Officers and Committees were then presented as follows and upon motion were regularly adopted :—

TREASURER

The report of the Treasurer was presented by Mr. Geo. Booth. It showed the finances of the Association to be in a satisfactory condition at the beginning of the year's work.

SECRETARY

The Secretary reported the progress of the Association's work following the recent Annual Meeting held in Montreal. He also asked the Executive Council to ratify the organization of the Threshing Machine Section with Mr. A. W. White as Chairman and Mr. W. H. Mason as Vice-Chairman. Mention was also made of the much regretted death of Mr. John F. Stairs of Halifax, who had been for many years a member of the Executive Council.

FINANCE COMMITTEE

The report of the Finance Committee was presented by Mr. J. O. Thorn. In addition to reporting the items of the regular monthly expenditure, it recommended the re-engagement of R. J. Younge and W. H. D. Miller as Secretary of the Association and Manager of Transportation, respectively, for the current year. Both of these officers in a few words expressed their thanks for the renewal of confidence shown by the Association in their services and accepted the positions offered to them.

RECEPTION AND MEMBERSHIP

The report of the Reception and Membership Committee was presented by the Chairman, Mr. R. Crean. The members of the Committee had held their first meeting on the 7th inst., when they met as the guests of the Chairman, representatives being present from Hamilton, London and Galt, as well as from Toronto.

It was decided, in accordance with the resolution approved of by the Annual Meeting, that steps should be taken at once to find out what arrangements could be made with steamship companies regarding rates for an excursion to take place next summer to Great Britain. As soon as definite figures were procured, it was decided that a letter should be sent to the members of the Association asking them for a definite reply whether or not they would take advantage of the opportunity offered.

It was decided that steps should be taken in the near future towards bringing the Hamilton members of the Association together once every month at luncheon. This practice may be adopted in other centres as well.

The advisability of holding monthly dinners in manufacturing centres during the coming winter was heartily approved of, and it was decided that the first dinner should be held during the last week in November in London.

The report stated that a well-organized effort would shortly be commenced by the Committee to increase the membership of the Association. Each member of the Association will be asked to secure one other, and the Committee desire the earnest co-operation of all the members of the Executive Council.

Thirty-five applications for membership, the names of which appear in another column, were recommended for acceptance.

RAILWAY AND TRANSPORTATION

The report of the Railway and Transportation Committee was presented by the Vice-Chairman, Mr. W. P. Gundy.

It discussed various questions of transportation as affecting the Association, including the question of classification. It is the disposition of the Committee to favor a discussion before the Board only of those general and specific difficulties which are likely to be hard to adjust by direct negotiation with the railways. The Committee considered the question of East and West bound general merchandise rates, taking the view which has long been held in the West (Ontario), that there is no sufficient reason why the East-bound general merchandise rates should not be on a parity with the West-bound general merchandise rates between the same points. It is hardly likely that any action will be taken by railways towards adjusting these unjust discriminations, nor is it likely that the Board of Commissioners will deal with the matter until complaint is lodged with them. It is the opinion of the Committee that action should be taken in the direction of having the rates made uniform, as undoubtedly many Western members have already complained. The report went on to say that the

Committee felt that the higher East-bound rates are not justified by the direction of tonnage or any natural difficulties, and that it is reasonable in the interest of Western members that action should be taken towards having the unjust discrimination removed. These differences in favor of the West-bound movement of merchandise apply from Eastern Ontario as well as all points in Quebec and the Maritime Provinces. Examples, by first-class summer rates :—Montreal to Toronto, 36 cents ; Toronto to Montreal, 40 cents ; Montreal to Hamilton, 38 cents ; Hamilton to Montreal, 42 cents ; Montreal to London, 42 cents ; London to Montreal, 56 cents ; Montreal to Windsor, 50 cents; Windsor to Montreal, 60 cents.

The report referred to the cases decided by commission : the Almonte Knitting Company's complaint, in which the Board reduced the rate on coal from the Niagara Frontier to Almonte from $2.40 to $2.20 per ton ; the Ontario Split Pea Millers' complaint which the Board settled satisfactorily to the Millers by restoring the application to split peas of the flour export rates, the withdrawal of which latter rates by the railways had the effect of killing the business; the United Factories case, in which a decision adverse to the contentions of the Association and the United Factories, has been handed out by the Board. Reference was also made to the case of the manufacturers of Metallic Shingles, which was laid before the Board in Ottawa, on October 18th, by the Ontario Vice-President, Mr. J. O. Thorn, and the Manager of the Transportation Department. This case was one of considerable interest through the amount involved and through the unreasonable stand taken by the railways from the time that the rate was changed. The judgment of the Board is awaited with interest.

The Committee concluded its report by expressing deep regret on the retirement from the Board of Commissioners of the Chairman, the Hon. A. G. Blair, and expressed a hope that the Government may be able to find a successor for the Hon. Mr. Blair who will carry on the good work so ably inaugurated by that gentleman.

TARIFF COMMITTEE

The report of the Tariff Committee was presented by the Chairman, Mr. W. K. McNaught. It stated that copies of the tariff resolution, adopted at the Annual Meeting in Montreal, had been forwarded not only to the members of the Association but to Parliamentary candidates throughout Canada.

COMMERCIAL INTELLIGENCE

The report of the Commercial Intelligence Committee was presented by the Chairman, Mr. A. S. Rogers. While no meeting of the Committee had been held during the month, the report outlined the most important features before the Committee in the work of the coming year. Efforts would be made to place in practical operation the new system of correspondent membership in the various foreign markets of the world. The establishment of a branch office in London would also receive careful consideration and steps would be taken for the publication of another edition of the Canadian Trade Index.

The report added the earnest desire of the Committee that during the coming year, the members of the Association throughout Canada should make constant use of the facilities provided for translations, securing financial reports on foreign firms and obtaining all classes of commercial information from any country in the world.

Mr. Richard A. Donald reported verbally to the Council the result of the interview which he and the Secretary had had on the 19th of September with the Prime Minister respecting the establishment of the London Office. Mr. Donald stated that the Prime Minister had shown deep interest in the project and promised his earnest consideration to the request of the Association. It was probable that the necessary support would be forthcoming in a few weeks' time.

INDUSTRIAL CANADA

The report of the INDUSTRIAL CANADA Committee was read by the Secretary. Its chief feature was the suggestion that the Executive Council should be requested to approve of the appointment of a general advertising solicitor who should cover all parts of the Dominion upon a commission contract basis.

A special Committee was appointed to supervise the tenders for the printing of the paper during the current year and it was suggested that these tenders should call for a better grade of paper and improved press work.

A pamphlet of Sir Lloyd Wise on the Canadian Patent Law was recommended for publication in the next issue of the paper.

The following important questions were before the Committee and will be reported upon later :—advertisements from firms in Great Britain, the terms for circulation agencies and improvements in the cover design.

By a unanimous vote Mr. T. L. Moffat, Jr., of Weston, was added to the Committee.

BRANCHES

The report of the Montreal Branch was presented by the Chairman, Mr. J. J. McGill. It is published in full in another column.

The report of the Toronto Branch was presented by the Chairman, Mr. Richard A. Donald. It also appears in another column.

CONVENTION BUSINESS

Disposing of the resolutions passed at the recent Annual Meeting it was unanimously decided that any of these pertaining to Government matters should be forwarded to Ottawa following the approaching Dominion elections.

Upon motion of Mr. McNaught, seconded by Mr. Taylor, the Council unanimously appointed the Finance Committee to carry out the wishes of the Annual Meeting in preparing a memorial of appreciation for the retiring President, Mr. Geo. E. Drummond.

The following were appointed to represent the Association in the proposed conference with the representatives of the Trades and Labor Congress of Canada :—Messrs. P. W. Ellis, J. O. Thorn, Toronto ; J. H. Tilden, Hamilton, and two of the three following members from Montreal, Messrs. J. J. McGill, Hon. J. D. Rolland and J. T. Hagar.

It was also decided on motion of R. McLaughlin, seconded by J. P. Murray, that the same Committee be authorized to arrange at some date in the near future a conference with the National Trades and Labor Congress.

Upon motion of Mr. J. O. Thorn, seconded by Mr. C. C. Ballantyne, the Finance Committee was authorized to report upon the system of engaging and remunerating the Branch Secretaries of the Association.

Announcement was made that the Chairman of the various Committees, together with the officers of the general Association, had been appointed a Committee to recommend a Convention Arrangements Committee who should have complete charge of the details for the next Convention.

The recommendation of the Annual Meeting that a special Committee should be appointed to investigate the question of technical education was by unanimous consent referred to the Parliamentary Committee with the request that they should nominate a special Committee.

FIRE INSURANCE

The Annual Convention adopted the following resolution with regard to fire insurance : "That the Executive Council of the Association be authorized to consult the Branches of the Association and to appoint a Fire Insurance Committee as outlined in the report of the special Committee, to prepare a plan for fire insurance, and submit the same to the Executive Council for approval, no plan to be considered which in any way affects the funds of the Association."

Carrying out this resolution, the Executive Council proceeded to appoint the Committee of twenty-one members, and adopted the suggestion that they should be chosen as follows :—Ten from Toronto, four from Montreal and one each from Hamilton, Winnipeg, Halifax, Quebec, London, Vancouver and St. John.

On motion of Mr. C. C. Ballantyne, seconded by Mr. J. M. Taylor, it was decided to request the following gentlemen to represent the Association from their various centres :—Geo. McAvity, St. John; F. H. Whitton, Hamilton; Lt.-Col. Gartshore, London. In the other centres the representatives will be appointed by the Branches of the Association.

Upon motion of Mr. Murray, seconded by Mr. McGill, it was decided that the members of the Committee should be elected for an indefinite term, the length of which might be decided at some date in the future.

RESOLUTION OF CONDOLENCE

The following resolution expressing the feelings of the Executive Council upon the death of Mr. John F. Stairs, was then unanimously carried :—

" The President and members of the Executive Council of the Canadian Manufacturers' Association desire to record their heartfelt regret and deep sense of loss sustained through the death of Mr. John F. Stairs, who has been for many years, and was, at the time of his death, one of their own number.

The high personal ideals, the enthusiastic patriotism, and the splendid devotion to duty manifested throughout his life, render the loss very great, not only to this Association, but also to the Dominion of Canada, and to the Province of Nova Scotia in particular.

The Executive Council, in recording its appreciation of his life of service, desires to extend its most sincere sympathy to the widow and family of the deceased in their tribulation."

TORONTO BRANCH

THE first meeting of the Executive of the Toronto Branch for 1904-05 was held on October 13th. Mr. Richard A. Donald presided. There were also present—Messrs. J. O. Thorn, W. P. Gundy, John S. McKinnon, W. B. Tindall, C. B. Lowndes, P. H. Burton, H. E. Bond, C. Gurney, John W. Cowan, Geo. C. Gale, John Northway, S. R. Hart, P. W. Ellis, J. P. Murray.

The Committee disposed of several matters as follows,—

CITY FIRE PROTECTION

At the request of the Board of Control, a Committee of five (Messrs. Richard A. Donald, W. B. Tindall, J. O. Thorn, P. W. Ellis and P. H. Burton) was appointed to take part in a conference composed of representatives from the Board of Control, Fire and Light Committee of the City, the Board of Fire Underwriters the Board of Trade and the Toronto Branch to consider increased fire protection in the City.

SMOKE PREVENTION

The Society of Chemical Industry invited the members of the Toronto Branch to be present at a meeting of the Society on October 27th at which the scientific prevention of smoke would be discussed. This invitation was accepted with thanks and the Secretary instructed to notify by postcard the members of the Branch.

EXPRESS RATES

A resolution to be forwarded to the Dominion Government was passed requesting that the control of express rates should be placed, as the freight rates are at present, under the jurisdiction of the Dominion Railway Commission. The resolution was as follows :—

" *That Whereas*, the freight rates charged by railways operating in Canada are subject to approval or change by the Board of Railway Commissioners,

" *And Whereas*, commodities carried by express are subject to practically the same conditions as those carried by freight, and the rates are for the most part fixed by the same corporation that decides freight rates and based upon the freight rates, it is only reasonable that they should be subject to a similar control ;

" *Therefore, Be it Resolved*, by the Toronto Branch of the Canadian Manufacturers' Association that the Dominion Government be respectfully asked to amend the Railway Act of Canada so as to place Express Companies in Canada under the jurisdiction of the Board of Railway Commissioners."

NEW MEMBERS

A special effort will be made to bring in a number of manufacturers in the city who are not members of the Association and Messrs. John Northway, Chas. Lowndes, J. S. McKinnon and H. E. Bond were appointed a Committee to supervise this work.

Y. W. C. A. HOME FOR GIRLS

The Y.W.C.A. of the city requested the co-operation of the Branch in raising funds to help furnish and maintain a home that they had procured to be used as a reception home for girls coming to Toronto to work in factories. The ladies were given an official letter endorsing the scheme and a list of the members.

MONTREAL BRANCH

Action re Gas Supply — Labor Matters

DURING the month the Montreal Executive Committee has held two meetings. A special meeting was convened on Sept. 26th to decide what action should be taken upon the condition of the supply of gas to the citizens of Montreal. The contract with the Montreal Gas Co. provides that the city may take over the gas plant at an arbitration value on May 1st, 1905, provided that notice is given on or before Nov. 1st, 1904. A communication had already been forwarded to the Chambre de Commerce and the Montreal Board of Trade asking for their opinions, and suggesting that the recommendations of the three business organizations should be in unison. Replies were received asking for a conference of Committees from each organization. Hon. J. D. Rolland, Mr. J. H. Birks and the Montreal Chairman were appointed a special committee to meet with these bodies.

RESOLUTION re GAS SUPPLY

Two conferences were held. At the second meeting the following resolution was unanimously adopted and sent to the Mayor :

Resolved :

1. " That in the opinion of this meeting of representatives of the Montreal Board of Trade, the Chambre de Commerce and the Montreal Branch of the Canadian Manufacturers' Association, it is advisable that the City Council should give notice to the Montreal Gas Co. before Nov. 1st, of its intention to exercise its option according to the contract to take over the gas plant at an arbitration value on May 1st, 1905, and

That the City Council should proceed to have such an arbitration value determined in order that the purchase at a definite price may be ratified by the property holders of the City, and further

That in the opinion of this meeting the City should immediately decide that if it secures the gas plant it will place the manufacturing plant in charge of a contracting company, the city retaining control of the distribution equipment only.

2. That the members of each organization represented at this meeting should recommend to their respective organizations that resolutions should be passed accordingly."

The regular monthly meeting of the Executive was held on October 6th, with the Chairman, Mr. J. J. McGill, in the chair. There were also present Messrs. Colonel Gardner, Chas. B. Gordon, J. H. Birks, Hon. J. D. Rolland, Geo. Esplin, J. S. N. Dougall, Clarence F. Smith, J. H. Burland and S. W. Ewing.

The different accounts in connection with the entertainment at the annual meeting were passed, and $25.00 was voted to the Firemen's Benevolent Society.

Letters were received from Mr. W. K. George, Mr. R. A. Donald and from the General Secretary, expressing the visiting delegates' appreciation of the entertainment afforded during the Convention by the Montreal members.

REPRESENTATIVES TO LABOR CONFERENCE

In response to a suggestion from the General Secretary, Messrs. J. T. Hagar, J. J. McGill and Hon. J. D. Rolland were appointed to represent the Branch at the conference with the Dominion Trades and Labor Congress.

A letter was received from Mr. T. J. Griffiths, the Secretary of the National Trades and Labor Congress, requesting that the National Trades and Labor Congress should be represented in any conference that was held between employers and employees in this country for the purpose of settling labor troubles. The Executive decided to forward this letter to the Head Office with the suggestion that inasmuch as this organization was a purely Canadian Association of workmen, opposed to international affiliation, their communication should be dealt with favorably if at all possible.

A complaint was received relative to the slow delivery of express parcels through the Customs Examining Warehouse. It was decided to again approach the authorities and to have this difficulty rectified.

Acting upon a letter received from Ald. H. B. Ames, stating that he proposes to move a resolution in the City Council to abolish the license fee imposed upon the users of electric motors, the Secretary was instructed to write the Chairman of the Civic Finance Committee requesting him to act in regard to the proposed changes in several of the license clauses.

A letter was received suggesting that the Executive should pass a resolution in opposition to the proposed revival of the winter carnivals in this city. It was decided to leave the matter in abeyance.

The applications of six new members were passed.

NEW MEMBERS

Passed by Executive Council, August 18, 1904

Bobcaygeon, Ont.

COWICHAN LUMBER CO.—Lumber.

Brantford, Ont.

BRANTFORD SCREW CO.—Screws.

KER & GOODWIN—Machinists.

Clinton, Ont.

MACPHERSON & HOVEY CO.—Threshing Machines.

Dundas, Ont.

NEW CENTURY REFRIGERATOR & MFG. CO., LIMITED—Hardwood Veneer Doors, Interior Trims, Refrigerators.

Montreal, Que.

AMES, HOLDEN CO., LIMITED (H. B. Ames, 2nd Member)—Boots and Shoes.

ARMOUR, LIMITED (David John Rattray, 2nd Member)—Beef Extracts.

BLACK BROS. & CO., LIMITED (Alfred H. Brittain, 2nd Member)—Boneless Codfish.

CAMERAS, LIMITED—Photo Printing Plates, Mounts, etc.

THE GRIMM MANUFACTURING CO.—Sugar Makers' Supplies and Maple Sugar.

ALFRED HAWKSWORTH—Mill Supplies, etc.

ALFRED HAWKSWORTH (Fred Hawksworth, 2nd Member).

INGERSOLL PACKING CO. (W. H. Dunn, 2nd Member)—Meats and Cheese.

HIRAM LEVY—Overalls.

PARIS WINCEY MILLS CO. (Alex. Shearer, 2nd Member).

UNION BOTTLING CO.—Soda Water, Ginger Ale and Mineral Waters.

Peterboro, Ont.

COLONIAL INK CO., LIMITED—Carbon Paper, Typewriter Ribbons, Writing Inks and Printing Inks.

Quebec, Que.

LOUIS MORENCY—Carving and Gilding.

St. Basile, Que.

THE HERVAY CHEMICAL CO.—Patent Medicines.

St. Stephen, N.B.

GANONG BROS., LIMITED—Confectionery.

St. Thomas, Ont.

CANADIAN IRON AND FOUNDRY CO., LIMITED (J. A. Kilpatrick, 2nd Member).

Seaforth, Ont.

THE ROBT. BELL ENGINE AND THRESHER CO.—Engines and Threshing Machines.

Stratford, Ont.

MACDONALD MANUFACTURING CO.—Engines and Threshing Machinery.

Toronto, Ont.

THE BERTRAM ENGINE WORKS CO., LIMITED—Steamships, Dredges, Engines, Boilers, etc.

THE J. A. CRAIG LUBRICANT CO., LIMITED—Oils.

GOULDING, SHANNON & MACFARLANE—Leather Goods.

HURNDALL NOVELTY FURNITURE CO., LIMITED—Cycle Wood, Wood Rims for Bicycles, Sanitary Woodwork.

J. HENRY PETERS CO.—Dress Trimmings.

THE PUGH MANUFACTURING CO.—Ladies' Underskirts, Carriage Rugs, Advertising Novelties.

RICHARD ROSCHMAN & BRO. (Fred H. Cragg, 2nd Member)—Buttons.

SAWYER & MASSEY CO., LIMITED (Robt. Harmer, 2nd Member)—Threshing Machinery.

SMOKELESS FUEL SAVING SYSTEM, LIMITED—Fuel Saving Devices.

FRANK STANLEY—Pianos.

THE UNITED ARTS & CRAFTS, LIMITED—House Furnishings.

JOHN E. WEBB—Brick.

CHICAGO SHIPPERS' FREIGHT BUREAU

Circular No. 1 of the Chicago Shippers' Association is just received. It reads as follows :

The Chicago Shippers' Association beg to announce the opening of their office in Room 1213, Merchants Loan & Trust Bldg., No. 135 Adams Street.

The object of the Association is to encourage more harmonious and helpful relations with the transportation companies, to the end that the commercial interest of the city may be conserved, and a remedy found, and applied, that will remove existing harmful conditions.

We invite to membership all merchants, manufacturers and shippers of the city and vicinity, who believe transportation conditions can be improved by organization.

(Signed) H. C. BARLOW,
Manager.

This is one of the two organizations recently established in Chicago to deal with the railway companies in matters affecting the transportation interests of their members, manufacturers and shippers.

Mr. Barlow, the manager of this organization, was formerly Freight Claims Agent of the Erie Railroad.

A FEW WORDS ABOUT PATENT LAW

And Some Suggestions

By SIR LLOYD WISE

DURING a visit to the Dominion, in the autumn of 1902, I had the privilege of submitting to the Minister of Agriculture certain suggestions for the amendment of the Canadian Patent Law, some of which were subsequently embodied in the Act of 1903. I also had the satisfaction of being assured, by one of your leading members, that if I prepared a communication on Patent Law Reform it would receive due consideration at your hands.

This highly gratifying encouragement has induced me to again visit the Dominion and to avail myself of this opportunity of submitting my views.

Of course, in regard to all questions affecting the welfare of the people, divergencies of opinion are sure to prevail, notwithstanding that even those persons most opposed to one another in their views are equally sincere in their desire to promote the public weal.

In practice, different persons will approach a given subject from widely divergent standpoints, a fact unquestionably attributable in large measure to the extent and character of their individual experience.

That, seemingly, is one reason why International Congresses on such questions as Patent Law Reform are not so productive of practically beneficial results as might, perhaps, be expected, regard being had to the vast extent and variety of special knowledge and experience represented at such gatherings.

EXAMINATION AS TO NOVELTY—IS IT DESIRABLE

Take, for example, the first question to which I am anxious to direct your earnest attention, namely, whether the application for a patent should be subjected to official examination as to novelty.

The average Frenchman or Belgian will say "No."

The average American or German will say "Yes."

If, then, the Congress take place in France or Belgium, there will be a majority against.

Assuming the gathering to be in the United States or Germany, there will be a majority in favor.

In reality, there is a great deal to be said both for and against.

And many of those in favor of official examination as to novelty are so because their experience is limited, and they fail to realize the dangers attending the systems heretofore in vogue.

In Great Britain opinion has been divided.

On the one hand, it has been truly pointed out that, in countries where official examination has obtained, valuable inventions have sometimes been treated as old, with disastrous consequences, such as refusal of patents to Bessemer for his steel process and to Siemens for his regenerative furnace.

On the other hand, with equal truth, it has been complained that, in countries where there is no official examination as to novelty, great hardship frequently results from allowing a man to go on in the dark, spending money on what he believes to be a new invention, whilst the Patent Office Examiner dealing with his application (having constantly to do with inventions in the same class) could, of his own knowledge, or with comparatively little trouble, give the applicant information which, even when not such as to render it prudent to abandon his application, would often prove most valuable, by enabling him, whilst covering what was new, to also avoid claiming too much, and thus invalidating his patent at the outset.

The problem to be solved, then, is to secure the benefit of official examination whilst at the same time avoiding what have heretofore been the attendant disadvantages.

SUGGESTIONS FOR A SATISFACTORY EXAMINATION

I venture to believe that a solution of that problem is to be ound in the English Patents Act of 1902, which embodies a scheme devised by me when quite a young man, but which it has taken over thirty years' hard work to educate public opinion in the Old Country up to the point of putting to the test. As, however, after careful investigation and report by a strong and eminently qualified Departmental Committee, the scheme has been placed on the Statute Book and is to come into operation next year. I confidently invite you to recommend the adoption here of a similar scheme. It may be summarized as follows :—

(1) Every application for a Canadian patent to be subjected to an examination in the Patent Office, with the view of ascertaining whether the invention claimed in the specification has been claimed or described in any, and what, specifications of Letters Patent already granted in Canada and dated less than fifty years previous to the date of the application.

(2) The result of this enquiry, when affirmative, to be communicated to the applicant.

(3) The applicant to be allowed a given time within which to amend his specification, and if he does so, the amended specification to be examined in the Patent Office, to ascertain whether it is still open to objection on the ground mentioned under head (1).

(4) A report to be made to the Commissioner of the result of the Examinations.

(5) The Commissioner to allow the specification if he be satisfied that there exists no objection to it on the ground that the invention claimed has been wholly or in part claimed previously, as set out under head (1).

(6) If not so satisfied, the Commissioner to hear the applicant or his representative, and, unless the objection be removed by amendment, to decide whether a reference to any, and if so, what prior Canadian patent specifications ought to be inserted in the applicant's specification, by way of notice to the public.

(7) An appeal to lie from the decision of the Commissioner to the Governor-in-Council, at any time within six months after notice of such decision shall have been addressed to the applicant or his agent.

(8) Reports of examiners not to be published in any case, and not to be liable to production or inspection in any legal proceedings, unless the Court or officer having power to order discovery in such legal proceedings shall certify that such production or inspection is desirable in the interests of justice and ought to be allowed.

(9) The issue of Letters Patent not in any case to be deemed to imply any guarantee of validity, and no responsibility to rest upon the Commissioner or any of the Patent Office officials for the completeness or correctness of the search.

Such is, in outline, the scheme I commend to your favorable consideration. It is one that I believe would be found to give general satisfaction ; which, if I may be allowed to say so, the system at present in vogue does not.

EXISTING REGULATIONS IMPRACTICABLE

The provisions of the existing law with respect to preliminary examination are, to my mind at least, not very clear.

It is provided that, on each application for a patent, a thorough and reliable examination shall be made by competent examiners to be employed in the Patent Office for that purpose.

But an examination as to what?

The Commissioner may object to grant a patent when he is of opinion that the alleged invention is not patentable in law ; or if it appears to him that the invention is already in the possession of the public, with the consent or allowance of the inventor ; or that there is no novelty in the invention ; or that the invention has been described in a book, or other printed publication, before the date of the application, or is otherwise in the possession of the public ;

or that the invention has already been patented, in Canada or elsewhere.

Furthermore, the specification must correctly and fully describe the mode or modes of operating the invention, as contemplated by the inventor.

Did the legislature intend that the "thorough and reliable examination" should extend, *inter alia*, to all these points? If not, then to which of them, and why not to the others? If it was to extend to all, then there was set a task it would be impossible to perform with any staff it would be practicable to provide.

This is strong language, but let it be remembered that the examination is not only to be *thorough*, but must also be *reliable*.

The futility of attempting anything so comprehensive in the way of preliminary examination is clearly shown by the numerous cases in which patents granted after official examination in the United States and in Germany have nevertheless proved to be invalid.

Quite recently I heard of a case in which an invention for which patents were granted in both the United States and Germany was found by the Danish Patent Office authorities to have been almost completely anticipated by an English patent.

Indeed, there is ample evidence available to show conclusively that no such thing as a reliable examination is realizable in practice, and that any attempt in that direction is liable to prove misleading and injurious, especially when coupled with power to reject an application where the authorities are not satisfied what the applicant's specification discloses, and that his claims are limited to what is really patentable.

As a rule, when a patent is demanded, the examiner knows nothing whatever about the invention beyond what the applicant's specification (sometimes accompanied by drawings and sometimes not) conveys to his mind. Often the invention has not even been tested by the inventor himself.

Patentability is a question of degree ; it is a question about which distinguished judges, and, likewise, eminent experts, often differ ; it is a question the correct solution of which frequently depends upon the practical effect of some seemingly very small difference between the invention for which a patent is demanded and some earlier invention or inventions discovered by the examiner, and, therefore, often cannot be reliably determined by mere comparison of specifications.

Where a patent is granted after a professedly thorough and reliable official examination a large proportion of the public are led to imagine it must necessarily be valid ; whilst, on the other hand, if a patent is finally refused, the inventor has no remedy.

Sometimes examining officials regard as identical things resembling one another much less than some of the inventions most successful in the past have resembled what had previously been proposed.

DEFECTS IN THE GERMAN SYSTEM

I have already alluded to the refusal of a patent for the Siemens regenerative furnace.

As to that, the late Sir C. W. Siemens stated, before a Select Committee of the House of Commons, that, as a rule, patents were granted in Germany for small mechanical improvements in machines and apparatus, but very rarely for an invention embodying a new application of any physical principle ; and that he applied with his brother for a patent for regenerative furnaces, and it was refused because, in the Middle Ages, stones were heated and thrown into the cellars of town-halls or other public buildings, in order to warm them, and that was considered a sufficient ground for refusing the application.

More recently, during the proceedings of a Commission that was appointed some years back to enquire into the working of the German Patent Law, some extremely interesting observations were made by gentlemen whose views should carry great weight.

Dr. Delbruck, Professor of the Technical High School, Berlin, (an official of the Imperial German Patent Office), said he had found that there was a tendency to find in old publications of inventions a great deal more than was intended by the original inventor, because these publications were read by the light of the additional knowledge that had been gained since that time.

Some members, it is true, advocated greater stringency on the part of the Office ; considering that the granting of a great number of patents for small improvements and for impracticable ideas was detrimental to trade. But this view was very effectually controverted by Mr. Klupfel (a member of the renowned firm of Fried. Krupp, of Essen), who stated that his firm, also, had feared at first that they would be greatly hampered by the number of patents, and had instituted a regular system of watching and opposing all applications that appeared to clash with their interests ; but they had soon found out that this was labor thrown away, as they did not find themselves at all inconvenienced by the grant of these patents, which were, to a great extent, allowed to die a natural death after a short term of existence.

Mr. Klupfel also said that no doubt it sounded very well in theory to eliminate, so to speak, all the dross by a system of examination, and only to grant patents for real inventions ; but, practically, this could not be carried out. He had personal experience of what an efficient examination as to novelty involved, and it was certain that the staff of the patent office was quite inadequate to the work. It was furthermore, in many cases impossible to arrive at a just appreciation of an invention from the mere examination of a written statement thereof. He drew attention to the many known cases where patents had been refused for inventions that had subsequently proved to be of the greatest importance, and of an unquestionably patentable character ; and he pointed out that the mass of cases in which patents had been unjustly refused did not become known, as the refused applications were not published. Many of these inventions had been entirely suppressed, owing to the refusal of the patents, to the great detriment of the community.

He furthermore stated, *inter alia*, that the German system had certainly not prevented a great number of patent actions being brought.

Dr. Werner Siemens (the eminent electrician) also spoke strongly in favor of granting patents freely, as by this means the ideas, whether good, bad, or indifferent, that were brought before the public were directly the means of engendering or stimulating fresh inventions; and so far from regarding the fact that only about 10 per cent. of the patents granted survived after the lapse of a few years as a blot upon the system of granting patents, he considered that this fact was one of the greatest points in its favor, as the law was thus instrumental in rendering available to the industrial community, free of all cost, after a comparatively short-lived monopoly, a vast mass of information which, without the existence of the patent law, would have been entirely withheld.

All the foregoing considerations go to support my contention that it is undesirable to cast upon the Patent Office authorities the responsibility of refusing Letters Patent in unopposed cases.

PATENTABILITY A MATTER OF OPINION

I may add, that it rarely happens that two specifications describe identical subject-matter, although it frequently occurs that the subject-matters of two are so much alike as to be practically identical. It has often been the case that the subject-matter of one specification has differed from that of another only in some feature or features deemed not to involve invention, and, therefore, not to constitute patentable subject-matter. Thus a United States examiner will report to an applicant that the subject matter he claims involves judgment rather than invention, and, therefore, is not patentable.

Where judgment ends and invention begins I will not pretend to determine. The whole question is very much one of opinion. But it cannot be reasonably doubted that the manufacturing indus-

tries of Great Britain have, in the past, benefited greatly from the commercial introduction of inventions under patents which, had preliminary examination and the power of refusal obtained, would probably have been refused ; but which, having been granted, and having led to important industrial and commercial results, have been, with the practical evidence then available, upheld by the courts.

In the celebrated case of Crane *vs.* Price, the invention consisted in the use of the hot-air blast with anthracite in the manufacture of iron. The hot-air blast had previously been used with bituminous coal ; anthracite had been used with the cold blast. The patent was upheld.

But how would a Patent Office examiner have been likely to deal with such an application, assuming he had power to reject it, and that his instructions were to reject in every case where, in his opinion, the subject-matter claimed did not involve patentable invention, regard being had to what was already publicly known ?

Again, in the great Capsule case of Betts *vs.* Menzies, plaintiff claimed the manufacture of the new material, lead combined with tin on one or both of its surfaces, by rolling or mechanical pressure, as in his specification described. The prior specification of one Dobbs comprised lead coated with tin by mechanical pressure. Some judges took one view ; some another. Ultimately the patent was upheld. But a Patent Office examiner, having before him Betts' application and the prior specification of Dobbs, and having to determine the question of patentability on a mere paper comparison, would, in all probability, have refused a patent to Betts.

Many other cases could be cited to show how opinions are liable to differ on the subject of patentability, even where ample evidence is available, which is very rarely the case at the time of application for a patent.

ADVANTAGE OF PROPOSED SCHEME

From what has already been stated it will be seen that under the scheme I advocate, and which I trust will recommend itself to you, the discovery of a prior Canadian patent deemed by the Patent Office authorities to anticipate the invention claimed by an applicant would not be a ground for refusal of the patent provided he inserted in his specification a reference to such prior patent, with a clear statement of what he nevertheless claimed ; and it will be furthermore understood that no official report as to want of novelty would be made public.

Here, then, is a system which would afford to the applicant and, so far as necessary, also to the public, a reasonable amount of information as to the state of the art at the date of the application, but without unduly hampering the applicant.

The inventor's interests would not be prejudiced by any obviously official notification upon his patent or on the records; on the contrary, when a prior patent had to be mentioned, there should be nothing to show that the applicant had not of his own free choice orginally mentioned it in his specification, as, in actual practice applicants commonly do for their own protection. On the other hand, the public would be amply protected, because the applicant's specification itself, by expressly mentioning the earlier patent would clearly restrict him. If the prior patent covered a full and exact anticipation, the applicant would naturally abandon his application. But, even if, in any exceptional case, an applicant insisted upon going on under such circumstances, he could do no harm, for his specification itself would prove the invalidity of his patent.

Such a preliminary examination does not extend to the utility of the invention. No such examination as to utility can be reliable, because many inventions give results in actual practice very different from what might be imagined from a perfunctory examination of a mere specification. Even should the invention prove useless, no injury to the public could result from the granting of a patent on the lines indicated.

In Great Britain it is recognized that the scheme in question, whilst reducing the number of cases in which inventors will be deprived of reward owing to their having, through want of knowledge, claimed more than they were entitled to, will also enable manufacturers to readily perceive what is really covered by a patent.

Any system which serves to clearly mark the boundaries between the rights of inventors and manufacturers is calculated to lead to more amicable relations between them, and to result in the taking up of inventions by manufacturers who might otherwise neglect them. In a word, it is submitted that patents granted under such a system would be well calculated to serve their fundamental purpose—the promotion of the industrial welfare of the country ; and such a plan as I have outlined has the further advantage of relieving the Patent Office authorities of the great responsibility of attempting an undertaking it is practically impossible to carry out, namely, that of correctly and finally determining, in the initial stage, and from a mere examination and comparison of papers, whether valid Letters Patent can be granted in any given case.

ANNUAL FEES MORE SATISFACTORY

Canadian patents are granted for a maximum term of 18 years. The fee for the full term is $60. But the applicant may pay $20 to cover the first six years, a second sum of $20 before the end of the sixth year, to cover the second period, and, before that period has expired, a further sum of $20 to cover the last six years of the term ; or he may pay at first for twelve years, and, in due time, the fee for the remaining six years—or he may pay at first for six years, and, before expiration of the sixth year, may make a a single payment to cover the remaining twelve years.

Thus, the advantage of periodical payments is already recognized.

Now I believe it would be still better to make the patent fees as follow :

On application for Letters Patent.....	20	dollars.
Before expiration of the fifth year, in respect of the sixth year	3	do.
Before expiration of each succeeding year (except the 18th) in respect of the following year of the term.....	3	do.

Of course, any patentee who chose to pay in advance for the entire term, or any part of it, should be at liberty to do so.

But, in practice, patentees rarely pay in advance for a long term in countries where they are at liberty to pay by yearly instalments.

My reason for recommending adoption of the latter is that, whilst they make it easier for a person of limited means to keep up his patent, they afford a ready means of bringing about, without injustice or hardship, an automatic weeding out of patents that are not being worked, and in which the owners have practically ceased to interest themselves, thus, as pointed out by Dr. Werner Siemens, rendering available to the industrial community, free of all cost, after a comparatively short-lived monopoly, a vast amount of valuable information.

Furthermore, an annual payment is less likely to be overlooked. Nevertheless, failure to pay may result from oversight, accident or other cause.

Thus, I have more than once been instructed to pay the renewal fee on a patent which had already become void through failure to make the preceding yearly payment.

In such case it would be of great advantage to be able to save the patent by payment of a penalty in addition to the overdue fee.

For this reason I strongly advocate introduction into the law of provision for payment of the fee at any time within twelve calendar months after the same shall have become due, subject to payment of a fine at the rate of, say $5 for 3 months,$15 for 6 months, $20 for 9 months, and $25 for 12 months' grace. It should, of course, be also provided that no proceedings should lie for infringement of the patent in respect of anything done between the date when the fee became due and the date on which the fee and the fine were actually paid.

COMPULSORY MANUFACTURE, IMPORTATION, AND COMPULSORY LICENSES

I will now deal as briefly as practicable, with certain provisions of the Canadian Patent Law in which the members of this Association are peculiarly interested, and which I respectfully invite you to approach with open minds and to consider most carefully, always remembering that, whilst recognizing that there are two sides to every question, I am, at the same time, not either an inventor, a manufacturer, or an importer, and consequently, have no personal interest in the issue, beyond a sincere desire to be in some small way instrumental in assisting to place Canadian Patent Law and practice upon a thoroughly sound and satisfactory footing.

The provisions in question are those relating, respectively, to compulsory manufacture in Canada, importation, and compulsory licenses.

And it will be convenient to consider them together.

It is, in effect, enacted that :

(1) Unless otherwise ordered by the Commissioner, a patent and all the rights and privileges thereby granted shall cease and determine, and the patent shall be null and void, at the end of two years from the date thereof, unless the patentee or his legal representatives, within that period or an authorized extension thereof, commence, and after such commencement continously carry on, in Canada, the construction or manufacture of the invention patented, in such a manner that any person desiring to use it may obtain it, or cause it to be made for him, at a reasonable price, at some manufactory or establishment for making or constructing it in Canada.

(2) If, after the expiration of twelve months from the granting of a patent, or an authorized extension of such period, the patentee or patentees, or any of them, or his or their or any of their legal representatives, for the whole or a part of his or their or any of their interest in the patent, imports or import, or causes or cause to be imported into Canada, the invention for which the patent is granted, such patent shall be void as to the interest of the person or persons so importing or causing to be imported ; and

(3) On the application of the applicant for a patent, previous to the issue thereof, or on the application, within six months after the issue of the patent, of the patentee or his legal representatives, the Commissioner, having regard to the nature of the invention, may order that such patent, instead of being subject to the condition as to manufacture, shall be subject to the following conditions, namely, that

(*a*) Any person, at any time while the patent continues in force, may apply to the Commissioner, by petition, for a license to make, construct, use and sell the patented invention, and the Commissioner shall, subject to general rules to be made for the purpose, hear the person applying and the owner of the patent and if he is satisfied that the reasonable requirements of the public in reference to the invention have not been satisfied, by reason of the neglect or refusal of the patentee or his legal representatives to make, construct, use or sell the invention, or to grant licenses to others, on reasonable terms, to make, construct, use or sell the same, may make an order requiring the owner of the patent to grant a license to the person applying therefor, in such form and upon such terms as to the duration of the license, the amount of the royalties, security for payment, and otherwise, as the Commissioner, having regard to the nature of the invention and the circumstances of the case, deems just ;

(*b*) The Commissioner may, if he thinks fit, and shall on the request of either of the parties to the proceedings, call in the aid of an assessor, specially qualified, and hear the case wholly or partially with his assistance.

(*c*) The existence of one or more licenses shall not be a bar to an order by the Commissioner for, or to the granting of, a license on any such application, and ;

(*d*) The patent and all rights and privileges thereby granted shall cease and determine, and the patent shall be null and void, if the Commissioner makes an order requiring the owner to grant any license and the owner refuses or neglects to comply with such order within three calendar months next after a copy of it is addressed to him, or to his duly authorized agent.

CO-OPERATION BETWEEN MANUFACTURERS AND INVENTORS SHOULD BE ENCOURAGED

Now, it is important to bear in mind that Letters Patent are granted for the express purpose of encouraging the introduction of new and useful inventions, and that, as a matter of fact, Patent Laws, by promoting the advancement of the manufacturing arts, have conferred incalculable benefit upon humanity.

Also that, as a rule, the striking results achieved in this direction have not been attained by individually great strides ; but that, on the contrary, in the case of almost any branch, whilst a comparison of the state of things half a century ago with that which now obtains will exhibit remarkable advance, investigation will show that advance to represent the aggregate of a number of improvements, frequently of a minor character individually, but the sum of which constitutes an amount of progress of the utmost value.

This being so, it is obviously of the highest public importance that the interests of manufacturers and inventors should be reconciled as far as possible.

Why should they treat one another with suspicion, and keep at arm's length ?

Why should laws be so devised as, whilst on the one hand, seemingly offering strong inducements to inventors, in the shape of temporary exclusive rights, on the other hand to provide every conceivable opportunity of depriving them of those rights ?

Is it going too far to suggest that, primarily, the explanation is, in a nutshell, that inventors and manufacturers are prone to seek too much from one another, rather than to exhibit the consideration likely to result in concession, co-operation and mutual benefit ?

EVILS OF COMPULSORY MANUFACTURE

Take, for example, that section of the Act which requires the patentee to manufacture in Canada. If it were deemed advisable, in the interests of the community, that every possible means should be resorted to for the purpose of adding to the number of your competitors, regardless of all consequences, then I could well understand the desire to maintain a state of affairs so likely to induce aliens to start manufacturing establishments in the Dominion.

But what about the possible effect upon existing industrial concerns ?

May it not prove, sooner or later, just as disastrous as that occasionally brought about by similar provisions in other countries ?

In France, for instance, where the Patent Law makes working compulsory, several German manufacturers interested in French Letters Patent relating to dye stuffs established branch works. Previously there had been about half a dozen French firms, at Lyons, Paris and other places, but after the introduction of the German industry into France they could not compete ; they were all killed out, with the exception of one in Paris, which, from being one of the first firms in the world, was reduced to a very small concern.

Surely that cannot be the sort of effect which you, as manufacturers, would desire to see brought about in any branch o Canadian industry !

Yet, the more important an invention, the more likely is it to be handled by capitalists in a manner that may seriously injure those already engaged in the particular line of industry most nearly affected.

In the case of an invention of little or no importance the enactment that the patentee shall be liable to lose his patent in default of manufacturing is obviously useless. No one cares whether the invention is placed on the market or not ; and,

certainly, no one will incur all the trouble and expense of seeking to get the patent annulled.

It is, then, precisely in those cases where strict observance of the provision as to manufacturing in Canada would be most likely to prove injurious to existing industrial concerns that it could be worth while to resort to legal proceedings for the enforcement of that provision.

In other words, no one would incur the trouble and expense incidental to any such costly proceedings except in the case of a patent for a meritorious invention for which there was clearly a market ; and, as a rule, the owner of such a patent would not be likely to risk the loss of his rights through failure to comply with the law, and might well be driven to comply in a fashion that would not commend itself to established manufacturers likely to be appreciably affected by his competition.

There is, moreover, another side to the question. The primary object of the Patent Law, as we have seen, is to encourage the introduction of new inventions, whereas the enactment that the patentee shall manufacture within the Dominion frequently has a directly opposite effect. It often gives rise to great uncertainty as to what may be the fate of a patent for an invention in the attempt to introduce which the patentee has expended much time, energy and money.

A man may be a highly meritorious inventor and yet not be in a position to start manufacturing, and may find his attempts to get others to take up his invention fruitless. This is not at all unusual. Many great inventors have encountered cruel discouragement not only at the outset but sometimes for many years.

Is it politic to take advantage of a patentee's difficulties for the purpose of depriving him of reasonable reward? Or can there even be any good and sufficient reason for so doing, if there exist an equitable compulsory licensing system which, whilst not likely either to inflict hardship upon patentees or to cause doubts respecting the validity of their patents, will nevertheless afford ample safeguards to the public in general, and to manufacturers in particular?

I venture to think not.

Of course, some patentees are themselves manufacturers carrying on business in the Dominion.

Patents they own, where they relate to manufactures capable of being carried on in their own works, are not at all likely to be affected ; and, under ordinary circumstances, could not be affected by the enactment that a patentee shall manufacture in Canada.

Rather will such patentees be interested in retaining the manufacture of the patented articles or the carrying on of the patented processes, as the case may be, in their own hands ; and there is nothing in the compulsory licensing provisions to prevent their so doing, nor do I suggest the introduction of any change in those provisions such as could operate to interfere with the exclusive enjoyment of his rights by any patentee who himself carries on the manufacture in Canada, and fairly meets the public demand, at a reasonable price ; which, by the way, is, practically speaking, all that the compulsory manufacturing enactment is intended to ensure.

THE PRICE WE PAY TO PROHIBIT IMPORTATION

I come, now, to the prohibition of importation.

To begin with, just consider what a heavy price Canada is paying for the maintenance of that prohibition ! Great Britain, the United States, Germany and many other countries belong to the International Union for the Protection of Industrial Property, and enjoy all the privileges which membership of that Union affords in matters concerning not only patents of invention, but, likewise, industrial designs or models, trade and commercial marks and trade names.

It would be out of place here, even did space permit, to enumerate all these privileges.

Suffice it to say that, *inter alia*, under the convention (which applies not only to products of industry properly so-called, but also to agricultural products, such as corn, fruits, cattle, etc., and to mineral products employed in commerce), subjects or citizens of each of the contracting states enjoy, in all other states of the Union, the same advantages in matters concerning patents of invention, industrial designs or models, trade and commercial marks and trade names, as their respective laws grant to natives ; likewise priority of right to protection ; liberty to import objects manufactured in any State of the Union into any other of such States in which they hold patents, without forfeiture of their patent rights ; the right to protection of any manufacturing or commercial mark duly registered in the country of its origin, no matter what may be the nature of the goods on which the mark is to be used ; protection of trade names in all the countries of the Union, without the necessity of registration ; the right to seizure of all goods illegally bearing a trade or commercial mark or trade name, and the enjoyment in all States of the Union of the protection granted to natives against unfair trading.

Canada is denying herself all these advantages, merely in order that if, after the expiration of a certain period from the granting of the Canadian patent, the patentee or patentees or any of them, or his, or their, or any of their legal representatives for the whole or a part of his or their interest in the patent, imports or import, or causes or cause to be imported into Canada the invention for which the patent is granted, such patent may (of course, on due proceedings had) become void as to the interest of the person or persons so importing or causing to be imported.

Is it conceivable that it can really be worth while to pay such a price for the retention of a legal provision of such doubtful advantage to Canadian manufacturers?

I hardly think so.

THE MEASURE EASILY EVADED

In the first place, the prohibition is strictly limited ; it extends only to parties actually interested in the patent, and, therefore, falls very far short of being an effectual bar to importation of the patented objects, even though actually made abroad by the patentee, or by others interested in the patent, provided they be not parties to the importation.

Hence, so far as the impeachment of patent rights is concerned, assuming that a Canadian patent belonged to a German manufacturer, and that he made some of the patented articles in Germany and sold them, say, to a firm in Holland, who independently exported them to Canada, it does not appear to me that the effect upon the interest of the Canadian public in general, or of Canadian manufacturers in particular, would differ materially from that of importation by the patentee himself.

Yet, while in the one case the rights of the patentee would, as the law stands, be liable to forfeiture ; in the other case, seemingly, they would not.

DEFEATS ITS OWN PURPOSES

And, after all, given adequate provision for securing to any Canadian manufacturer who may seek it, a license on reasonable terms, provided the circumstances of the case justify that course, what greater reason is there for prohibiting importation of an article that *is* patented, than of an article that is *not* patented?

Does not such a state of things in some measure involve a contradiction, seeing that, whereas the ostensible object of the patent law is to encourage the introduction of new and useful inventions, the Dominion stipulates that should such introduction occur in a particular way the patent rights will be forfeited?

Practically the Dominion says to the inventor : Provided you do not in any way protect our market from being flooded with foreign articles according to your invention, made by all and sundry, wheresoever they please, but, on the contrary, you throw the Canadian market open to the entire world, so that all may

freely compete with our own manufacturers, then we will allow you, yourself, also to import, as freely as you please, subject to payment of the duty applicable to your case. If, however, you in any way restrict competition, you shall not import at all, even on payment of the duty.

How does such a state of things benefit the Canadian manufacturer?

No doubt the original intention was to render it impossible for anyone to secure the Canadian market exclusively for imported wares, to the detriment of Canadian manufacturers.

That is quite natural and reasonable.

It is precisely what I hope Great Britain will accomplish in her own case.

But I submit that it is an object which the Dominion might practically accomplish more advantageously without unconditionally prohibiting importation.

AN EFFECTIVE LICENSING SYSTEM MORE SATISFACTORY

I suggest for consideration whether absolute prohibition might not well be limited in its application to the cases of subjects and citizens of countries in which Canadians are placed under the like disability.

What need is there to go beyond that, so long as any Canadian industry likely to be injuriously affected by the importation of patented articles can promptly secure adequate relief under a simple and economical compulsory licensing system?

Let it be remembered that an importer will invariably be handicapped. Carriage and import duty must always be added to the cost of production of his wares. Even if, on account of distance between market and place of production, we assume that Canadian-made goods will have to bear an equal charge for carriage, there will still remain the import duty as against the foreign product.

That duty, of course, varies considerably,—on some articles it is 35 per cent.; on others, 30 per cent.; on others only 25 per cent., and so on.

But taking, for the purpose of illustration, a case in which the duty amounts to 25 per cent., and assuming that the patentee is required to license Canadian manufacturers at a royalty of even 7 per cent.; the importer will still be handicapped to the extent of 18 per cent.

And will not the interest of the Canadian licensees, in addition be more effectually protected than would be the case if the patent were annulled and the Canadian market thrown open to the keen competition of the whole world; or if, in the alternative, the patentee established works in the Dominion and kept the manufacture of the patented articles exclusively in his own hands?

It is to be understood that I do not suggest that a patentee should be allowed to oppose to an application for a compulsory license the plea that the reasonable requirements of the public in reference to the invention laws have been satisfied by importation.

On the contrary, no amount of importation, however extensive, should be taken into consideration as against a *bonafide* application, by a responsible manufacturer in Canada, for a compulsory license.

SUMMARY OF PROPOSED LEGISLATION

This paper has already assumed inordinate length, although much has necessarily been omitted which would have been pertinent to the complex but highly important subject with which I have (as I well know, only too feebly) endeavored to deal.

I must, therefore, now conclude.

I cannot do so, however, without saying, at the risk of repetition, that I sincerely hope the views I have ventured to express may commend themselves to you, and that you will see fit to promote legislation on the following lines, namely:

1. Substitution for the present official preliminary examination of a novelty examination scheme based upon that embodied in the English Patents Act of 1902, but limited to prior Canadian patents.

2. Substitution for the present periodical payments of a small annual fee in respect of each year subsequent to (say) the fifth year; with a maximum grace of one year, subject to an appreciable penalty.

3. Such modification of the existing compulsory licensing provisions as will clearly give to the Commissioner of Patents power to order the grant of a license in any case where he is satisfied that such a course will be in the public interest; and, also, full power to make and enforce rules, regulations and orders with respect to the payment of costs in cases of applications for compulsory licenses.

4. Application of the compulsory licensing provisions to all future patents.

5. Limitation of the obligation to manufacture in Canada to the cases of subjects and citizens of countries in which patents owned by Canadians would be liable to annulment in default of manufacture.

6. Such modification of the law as will enable the Dominion to join the International Union for the Protection of Industrial Property, and, generally, to enter into reciprocal arrangements with other countries with respect to the working of patents, the importation of patented articles and analogous matters.

PROTECTION ATTRACTS IMMIGRATION

IN the course of his address at the Annual Convention of the Canadian Manufacturers' Association in Montreal, President W. K. George, referring to a letter in which an English lord advised a prominent Canadian that if Canada would throw down its tariff walls population would flow in like a mighty stream, said: "Here are two countries, side by side, divided by an imaginary and invisible line; alike in every essential natural resource and in potential greatness, one having no advantage over the other, as similar in these respects as are the two halves of this paper. One has an exceedingly high tariff, the other a moderate or low tariff. Surely the one with a high tariff must have, to a superlative degree, all those features detrimental to immigration, which his Lordship saw in tariff walls. But, gentlemen, what are the facts of the case? To which country did the tide of immigration flow, in which land did the millions upon millions seek a new home? You all know the answer. In that land which was protecting and building up its industries, offering congenial and remunerative employment to its people, and developing its home market. And as if that were not enough, to that same land went a million and a half of our own Canadian-born."

The Liverpool Daily Post, referring to the fact that the emigration from Britain to Canada in August, 1904, was 255 less than in the same month last year, while there was an increase of over 10,000 in the emigration to the United States during the same period, said: "It is remarkable that the number of British emigrants who sail direct to Canada is less than one-third of the total going direct to the United States." *The New York Sun*, commenting on this, said:—

"It is altogether probable that this current sets towards us instead of towards Canada for economic rather than political reasons. Many emigrants would doubtless be glad to live under the British flag, but Canada has little to offer new-comers except land, and land costs money. A stress of industrial conditions is one of the chief causes of emigration. Only a small percentage of those who leave their homeland in order to improve their condition have the means wherewith to buy land and maintain themselves until the land will maintain them. An immediate income for manual labor is indispensable in a majority of cases, and for that Canada offers only a limited prospect. Therefore they come to this country, with its vastly wider field of industrial opportunity. Canada's turn will yet come."

The important point is that every immigrant who gets employment in the industrial establishments of the United States consumes farm products grown in the United States, and so makes the home market more profitable for the farmers.

A WINTER TRIP TO NASSAU

By GEO. H. HEES

EVERYBODY in search of health or pleasure should, if they can, make a winter visit to Nassau, the "Queen of the Bahamas."

Leaving New York, with its snow and ice and wintry blizzards, in less than four days you are in Nassau amid warm sunshine, fragrant flowers and beautiful song-birds.

The shores of Nassau are washed by the Gulf Stream, and the climatic influences of the Trade Winds make an equable climate during the winter months of an average of 72 degrees. Frost and malaria are unknown on the Island. The best months to visit the Bahamas are January, February and March. The evenings are delightfully warm, and pleasant odors from many tropical trees and flowers yield their perfume after the setting sun.

HISTORICAL

The Bahamas were for nearly three hundred years governed by the Spanish, but since 1787 they have been British dependencies. Columbus is supposed to have landed October 12th, 1492, on what is known as Wattings Island, which he named San Salvador. It is about two hundred miles distant in a north easterly direction from Nassau. The inhabitants Columbus named Indians, and they are believed to have been of the race of the American Indian. Many changes among the inhabitants have taken place since then, and of the 14,000 in and around Nassau, only about 2,000 are white. In wandering about the Island you wonder where so many whites are, for outside the city you seldom see any but the colored race. But there are enough officials and business men to form a colony of their own, and so Nassau is not without its "social four hundred."



A NASSAU SPONGE YARD.

The era of Nassau's greatest prosperity was during the Civil War in the United States, when it was the harbor of refuge or blockade runners and refugees. In January and February, 1865, more than twenty steamships laden with cotton arrived at this port. So great was the increase of business, that the English Government built the large "Royal Victoria" Hotel to accommodate the influx of business men and refugees. This hotel is now used for the overflow of the new "Colonial" Hotel, both of which belong to the system of Flagler's famous Southern Hotels.

The colored race is peaceful and gives the authorities but little trouble. They are generally neat and very polite to the whites, and if there are beggars on the Island I never came across one. They are better featured and speak the English language with less dialect than their black neighbours of the Southern States.

The big American liners direct from New York, call at least weekly, and steamers from Florida during winter months arrive and depart tri-weekly, and tramp steamers trading with the Islands are in port frequently. The trade is supplied almost entirely by United States houses, who look closely after the wants of the merchants.

INDUSTRIAL

Sponge and fruit are their principal exports ; scores of vessels are engaged in sponge gathering, and all sponge gathered among the Bahamas is brought to Nassau, which is said to be the principal sponge market of the world. The arrangement between vessel owners and crew is so fair that strikes are unknown. After the vessel owner deducts the cost of provisioning the vessel for the voyage, the cargo is sold at auction and the money divided between vessel owner and crew, each taking half. Should the vessel owner wish to buy his own cargo, he can do so only by being the highest bidder. Sponge is first dried, then pounded with a wooden mallet to get the sand out ; girls then trim off the rough edges and "fingers," after which it is ready for the auction sheds. Sales are frequent, and buyers from the States and Europe are always in attendance at the auctions.

Their "auctions" are seemingly a misnomer as they are conducted without an auctioneer. Buyers use blank cards as they walk around the sponge which is separated by partitions. They mark on the card the number of the lot and their offer, the cards are then handed in at the office, and the lot, of course, is awarded to the highest marked price.

Cotton was at one time grown on these Islands, and in 1783 over eight hundred slaves were used in this industry on Long Island ; but the red bug got into the bolls and destroyed several crops in succession, and after the abolition of the slave trade in 1834, the business was abandoned.

During the Spanish American War when the ports of the Philippine Islands were closed, rope became scarce and Manilla rope went up in value with a bound. They found in Nassau what seemed to be a substitute for hemp grown in the Philippines. It is known as "Sisal" and belongs to the Cactus family. The sprouts or leaves are about four feet long, thick and tough, with sharp points on the edges. The fibre is long and very strong, but rope made from it is inferior to Manilla rope. It becomes hard and stiff when wet and is slow in drying. Since the close of the war the industry has greatly fallen off, though sisal is still used with some success in the manufacture of small cords and twines.

THE GOVERNMENT

Nassau is the capital of the thirteen Bahama Islands. It has a paid fire department, electric lights, churches, schools, a branch of the "Bank of England" and other public institutions.

Parliament meets in February and is opened with the same pomp and ceremony as the House of Lords in England, or Parliament in Ottawa.

The thirteen members from the sister Colonies are of all colors, the white, copper-colored, yellow and black. The House opens at high noon, and the members come in all sorts of clothes—the full dress with high hat, some in white duck and straw hats, some in short colored coats and Havelock hats and some in large check tweeds.

The Governor-General is appointed by England and has the same authority as the Governor-General of Canada. He read his

report of the financial condition of the Bahamas, which showed they are well prepared to take care of their debts. One of their good assets is their cable to Florida. He lectured his people for not giving more of their labors to cultivating the land and fruit, and less to fishing and sponge gathering, and gave good advice about education, schools, churches and charities. His appearance was very impressive as he was covered with as much gold lace and decorations as if he were King Edward himself.

NASSAU FISH MARKET

At the market are many kinds of fish, for the waters of the Bahamas swarm with tropical fish and turtles. Some are of most beautiful colorings and strangely odd shapes. The valuable green turtle, the delight of epicures, fresh from the waters, is always on sale at the markets. At the curio shops are many souvenirs you will want to take home—curios made from the wonderful lace bark tree, shells of dazzling beauty, and sharks' teeth formed into fantastic shapes. The valuable tortoises that produce the shells that are made into combs and artistic jewelry are found in these waters. Shop and factory are usually combined, and these beautiful goods are made before your very eyes while you wait.

You may watch the old mammies in the market serve out to the pickaninnies for a penny, their breakfast of a hodgepodge of fish, corn and rice. Living is cheap, and a few cents will buy the day's food for the black man.

Tropical air produces langour and you are not surprised at the little work performed by the natives. I said to an old darky one day, "How do you folks get your living, you never seem to be at work, but always lazing around?" "Well it's this way, Chief," said he, "we live mostly on the white visitors in the winter and then, by the Grace of God, til they come back again."

THE DRIVE TO THE CAVES

The formation of the Island is coral and the roads are good. There are many pleasant drives, and one of special interest is up the Coast to the Caves. Near by is a large orange and pine-apple grove worth visiting. A pine-apple farm is not unlike a cabbage "patch" except in color. The young pines are of bright pink, green and brown, but take on darker hues as they mature. At the Cave you will see a antastic old darkey, who on entering, lights a bundle of faggots, and as he swings the burning mass around his head, to light up the dark recesses, you will be reminded of Dore's weird pictures of "Dante's Inferno." If you drive to the phosphorescent lake you will see the most brilliant sheet of water in the world—a fresh water lake, but, curiously enough, it rises and falls with the tide. A man coming out of it looks like a demon emerging from a sea of fire.

HOGG ISLAND

Probably never can you get so much value for your money as when you visit Hogg Island. The boatman takes you across the bay, a mile from the city, where you meet Captain Hague who owns the fruit grove and farm. After handing him an En sh shilling, you are invited to the tables filled with fresh picked fruit, oranges, melons, bananas, cocoanuts, bread fruit, star apples, pine apples, custard apples, sapadillos and grape fruit growing all around you. You will see the black boys picking oranges that have just arrived at the acme of perfection. The oranges are peeled and a wooden skewer run through them, and you eat them rom the skewer, as you eat corn off the cob. If you do not eat at least a dozen oranges, the Captain thinks you are not fond of the fruit; you are urged and urged to eat, and you do eat, and you then understand why the place is called "Hogg Island." Then you walk across the Island to one of the best bathing beaches in the world, and the water is so delightfully warm and exhilarating that when you come out, you are hungry and hasten back to the fruit tables where you again attack the fruit, until you are surprised that you can eat so much. I have picked and eaten oranges in Florida, Cuba, California, Honolulu, Australia and among the naked savages of the Fiji Island, but to me no orange is equal in delicious flavor to that of "Hogg Island." You are rowed back



A SISAL PLANTATION.

to the city b the black boys who entertain you with their rag-time coon and sentimental songs, and all this variety of pleasure and entertainment for the single shilling and tips to the boys.

THE SUBMARINE GARDENS

An excursion you will never forget is a short sail up the Bay to the "Submarine Gardens." The Government has carefully guarded these valuable gardens for more than a century, and poachers are severely punished, so now the growth of centuries can be seen in all their natural perfection. Arriving at the Gardens you get into a small boat with a glass bottom; as you are moved slowly over the surface you will notice the glass makes the water perfectly smooth, the bright sunshine showing through the glass illuminates and magnifies this wonderful aquarium, and you feel you are floating over fairy-land itself.

Coral is a calcareous secretion or deposit of that busy little animal the "Zoophyte." The formation of coral under favorable circumstances goes on with wonderful rapidity; masses have been

found to increase several feet in a few months. It is never found in waters of a temperature lower than 68 degrees. You will see coral in various colors and formations, beautiful grottoes, trees and bushes, and castle-shaped forms, branches, flowers and mushrooms that could only be fashioned by nature's hand, and the garden is full of brilliantly colored fish that are found only in tropical waters. It is amusing to watch them mistaking the clearness of the glass for water, bobbing their noses against it. You will see gar fish, angel fish, electric eels, crabs, lobsters, starfish and tortoises swimming and crawling among the beautiful corals and shells; sponge all the way from the baby bath size to those as big as the head of a barrel; open coral fans held by their stems and gently swayed by the motion of the water as if held in the hand of a flirtatious belle; vegetation of brilliant hues and of queer shapes that you can touch with your hand, all of which gives you a feeling that you have seen one of the most wonderful and beautiful sights in creation and reminds you of that passage, "They that go down to the seas in ships, * * * see the works of the Lord and His wonders in the deep."

"LOCAL COLOR"

If you are looking for "local color" drive out to Grants Town, a suburb of Nassau and the home of the black man. If you happen to be there Sunday night go to the Shouters' Church and see an old-fashioned camp meeting—greatly intensified. The high singing, shouting, bucking, clapping of hands and stamping of feet rivals Bedlam itself. On the occasion of my visit the preacher became annoyed by the obstreperousness of some of the young bucks and reprimanded them by saying, "Dere's some one here to-night I am 'shamed of and 'taint me nuther. You bucks ought to be 'shamed of you 'seves, being so reckles—dont you see 'deres white folks present." After the collection plate had been passed several times, the preacher finally took it in hand and said, "Now, I want you white folks to come down wid you' money—you white folks have got all de money, but we colored folks have got all de genius." The colored Bishop from South Carolina was there and said, "When I was here last year, I promised this Church when I came again to give it ten dollars. Now you see this ten dollar bill"—holding up the money—"I hand this to your preacher and I aint going to take any receipt for it 'cause I got all your white folks for witnesses."

Coming back you see the high triangular shaped monument and the picturesque old Spanish forts. Go outside the harbor for deep sea fishing and maybe you will get a big shark or two, but surely plenty of porgies, blue fish, and the gamiest of all fish, the brown baracouta. It is one of the customs of the boatmen to entertain the sportsmen with their native songs and stories. Their voices are usually smooth and musical, and some of their stories are very funny. The pickaninnies dive for money thrown to them as the boat is coming to the dock and they never fail to catch the shining coin before it reaches the bottom.

The verandahs of the hotel are filled with guests listening to splendid music, for the hotel orchestra would please old Orpheus himself. The scene at the ball in the evening, where costly gowns and brilliant jewels that represent small fortunes are seen in bewildering display, is one long to be remembered. Beautiful women and society leaders that you read about—distinguished people from everywhere—authors, artists, preachers, actors, and the great leaders in commerce and finance are here in their happiest moods for health, recreation or pleasure, or all combined.

But there are minor hotels and boarding-houses to suit the pockets of all. Some are of the Spanish type with broad piazzas enclosed with lattice, hammocks and cozy-corners and other comforts for those who wish a more quiet life.

Sufferers from grip and nervous diseases find relief in this salubrious climate.

It has been noticed how quickly the business or professional man who has been keyed up by a too strenuous life takes on a lazy feeling, and soon begins to show the good effect of a winter spent in the Tropics. It is the ideal winter home for worn out bodies and jaded nerves.

KRYPTOL

A New Substance for Electric Heating

In his report of September 17th to the Department of Commerce and Labor, U. S. Consul-General Mason, of Berlin, Germany, writes as follows with regard to an important innovation in the line of electric heating.

Among the notable recent German inventions in the field of applied science is an electric resistance material for heating purposes, to which has been given the name "kryptol." The exact method of its preparation and the proportions of its ingredients employed are not disclosed by the specifications of its patent, but it is a mixture of graphite, carborundum, and clay so combined as to form a loose granular mass or powder of four grades or degrees of coarseness, which are severally best adapted to different heating operations.

Electric heat may be developed by two general methods: The electric circuit may be broken, so that a voltaic arc is formed, and the charge in the furnace is thus heated directly, or the current may be transmitted through a conductor that offers enough resistance to generate heat, which is imparted to other substances by contact. This is the indirect electrical heating system, of which kryptol offers the latest and most interesting example.

The two main difficulties inherent in voltaic-arc furnaces are: (1) Only very high temperatures are developed, which are difficult to modify and control, and (2) the arc consists largely of incandescent particles of (usually carbon) electrodes, which render the flame so impure as to preclude its use for many important purposes. Both of these defects are remedied by kryptol, which develops heat of any desired intensity from a gentle warmth up to 3,000° Cel., and is clean and free from dust and other impurities. Moreover, it avoids the use of platinum, nickel, and other metallic wires and foils that have been hitherto used in resistance furnaces, thereby securing important economy and avoiding the danger of short circuiting and other accidents, which is always more or less present when metallic spirals in connection with crucibles are used.

The property of kryptol, upon which its efficiency depends, is the fact that it offers to an electric current the requisite degree of resistance to generate a high degree of heat without destruction to its own substance. Consul Mason illustrates the method of its operation by means of an earthenware plate inclosed at its edges in a wooden frame and bounded at two opposite sides by carbon electrodes which rest upon the plate and are connected by insulated wire conductors with a current supply, forming, when the break between the electrodes is closed, an electric current. Upon the earthenware plate is loosely strewn the granulated kryptol to a depth of about an inch. This, when the kryptol is laid continuously across the plate, forms the electrical connection between the two electrodes and closes the circuit. When, however, the kryptol is brushed or scraped aside so that an open, uncovered space is formed through the layer across the plate, the circuit is broken and the apparatus remains, so to speak, dead. If now the kryptol is brushed into the open space, so as to form a connection between the two masses lying against the electrodes on either side, the circuit is at once restored, and the kryptol forming this thin connecting layer begins to sparkle and glow, becoming in a few moments incandescent and generating a heat that will raise cold water to boiling in three or four minutes.

A peculiarity is that the incandescent action takes place only at the places where the layer of kryptol on the plate is thinnest, and it is therefore easily possible to create heat just in the place where it is wanted and not elsewhere, for in this case the thick bed of granular material on other portions of the plate remains cool and impassive and may be touched or stirred by the naked hand with entire impunity. The finer the grains of kryptol the less active is the incandescence, and it is for this reason that the four different grades or numbers of the material are made, to be used as may be required in generating different temperatures.

This extreme tractability, by which the temperature can be absolutely regulated by increasing or diminishing the strength of the current or by altering the thickness of the kryptol layer, one or both, renders it applicable to a large variety of practical uses, among which some of the more important are as follows : For heating street cars, hallways, sleeping and other rooms, and laboratories where a continuous uniform warmth is essential. The apparatus includes a simple cast-iron flanged radiator, the interior lining of which is glazed so as to insulate the kryptol mass with which it is filled. At each end is an electrode, usually of gas carbon, connected with wires carrying a current of 4 to 5 ampères and about 120 volts. Such a heater, which can be put under a car seat or beneath the floor, where it is out of sight, can easily be managed by the conductor or motorman, can generate and maintain indefinitely any desired temperature, and can be used without refilling for weeks together, would seem to solve, technically, at least, the problem of street-car heating in cold climates. The radiator is made with a close-fitting cover, for it is found that the kryptol endures unimpaired much longer in a closed chamber than in the open air. A radiator in daily use requires filling with fresh kryptol once in about three months.

This process lends itself with great convenience to all the finer smelting operations in scientific and industrial metallurgy. These operations may be carried on by means of a small crucible furnace, which consists of an iron shell with an enamel lining filled with coarse-grained kryptol, in the centre of which is hung a movable graphite crucible, in which any temperature up to 2,000° Cel. (3,632°F.) may be generated. With a current of 15 ampères, nickel, the smelting point of which is about 1,600°C., may be fused in about six minutes.

Some of the steel and cutlery manufacturers in Westphalia are experimenting with kryptol with a view to its employment for tempering, annealing, and case-hardening steel and iron bars, knives, scissors, and other implements. Such processes would become thereby automatic and independent of the skill of the workman.

For chemical laboratories the new material has already been adopted by the University of Berlin, the Technical College at Aix la Chapelle, the Imperial health office at Berlin, and other State institutions. When used in ovens and heating devices of various patterns it enables the chemist to heat substances to any desired temperature and to maintain an unvarying degree of heat for an indefinite period. In elementary organic analysis it is frequently necessary to heat parts of the substance under examination to different temperatures and to leave another portion not heated at all. For this purpose a simple but effective apparatus has been devised. It consists of an iron frame on which is laid a fire brick trough or gutter, glazed inside and filled with kryptol. In this is laid the combustion pipe, which may be a glass tube, containing the material to be treated. The current being sent through the whole, even mass of kryptol, heats the tube uniformly throughout its length ; but when it is desired to heat one portion to a high temperature, it is only necessary to scrape the kryptol aside and reduce the thickness of the layer under that part of the tube, when it at once begins to glow with accelerated heat, while the temperature of the other parts remains unchanged. If it is desired to withdraw or exclude the heat entirely from the central part of the tube, two copper forks, which slide along a brass conductor, are introduced into the kryptol, which take up the current and pass it by the conductor over the intervening space, leaving the kryptol and that section of the tube cold and excluded from the heating operation.

As the ingredients of kryptol will withstand any temperature up to 3,000° Cel., its use for heating up to that limit is restricted only by the nature of the material of which the furnace and crucible are composed. Being itself a poor conductor of heat, it retains its warmth for a long time, and on account of its cleanliness and absolute tractability offers a key to a new and convenient system of cooking and of warming dwellings and other buildings wherever electric currents can be cheaply generated and supplied.

AGITATION IN THE PIANO TRADE

Ability Discounted in the Interests of the Inefficient Workman

EARLY in October a strike occurred in the finishing department of the Palmer Piano Co. of Toronto which threatened to involve all of the piano manufacturers of the city and which was finally averted with the assistance of the Employers' Association.

The recognized hourly rate in the piano trade is 27 cents or $27 a fortnight of 100 hours and the piece work prices are based on that scale. In the Palmer Co. the men were earning between $27.50 and $28.50 in the fortnight, or between 27 and 28 cents. They were out for a 50 cent increase in piece work and a flat rate of 30 cents an hour day work or $30 a fortnight. This would have brought their piece work wage up to between $32.50 and $33.50 a fortnight, which the Company would not accede to.

The Palmer Piano Co. referred the question to the Employers' Association and a general meeting of the trade was called to decide what action should be taken to resist the increase of 3 cents an hour. A formal letter was sent to the Local Union asking for a statement of their case to which no answer was returned. A meeting was then arranged between the striking employees of the Palmer Piano Co. and the Secretary of the Employers' Association at which some interesting information was obtained. The men were asked if their action had been sanctioned by the Local Union. They refused to answer and said that information as to that point must be obtained from the Local Executive which had previously declined, however, to acknowledge the letter sent them. The wage question was then taken up ; it was found that the men were able to earn over 27 cents an hour, but demanded a straight 30 cents or $15 a week. In comparing the books and time sheets of the Company with the statements of the men as to wages received a curious state of affairs was disclosed. It appears that in the factory there was a Union delegate who marked all the time slips of the men before they were submitted to the firm. These slips so marked showed a uniform 27 to 28 cents. Some of the more skilful workmen, however, had deceived the Union censor and while presenting dummy slips for his signature had sent in their true return of work to the firm of upwards of 32 cents and in some instances 34 cents an hour.

A curious anomaly was thus presented of men striking for 30 cents when some of them working without restraint were drawing 32 cents and over. It was clear from this examination that the work of the more skilful was being curtailed in order to enable the less efficient to earn the same wages. The demand had been based on the ability of the slowest worker to which all the others were expected to, and by the action of the Union delegate forced to conform.

The Piano Makers' Association as a result of the investigation forwarded the following resolution to the Union :—

" That having heard the report of the Secretary of the Employers' Association as to the result of his conference with the striking men of the Palmer Piano Co., and after having examined the wages of the Palmer Co. paid during the past months and finding that the rate of wages is considerably in excess of the established rate of 27 cents an hour, that the Secretary of the Employers' Association be instructed to advise the Executive representing the striking men that the Palmer Piano Co. should not pay any increase in wages and that the Executive Committee be instructed to see that the men return to work by Saturday, the 15th inst."

The Secretary of the Union replied that they admitted that in the varnishing department the men were being paid in excess of the scale and withdrew the desired increase in that department, but in the other departments they claimed that the 30 cents was

the common rate paid by certain other manufacturers of the city and that they as a Union recognized the 30 cents per hour scale.

The Piano Makers' Association had statements prepared by each firm which on comparison showed that the statement of the men was not correct, that the piece work prices were based on the 27 cents a hour rate and while some of the men were drawing upwards of 30 cents it was on account of skill and industry on the part of the individual worker and was not due to any advancement of the scale. It was decided to take a firm stand in the matter and the following resolution was forwarded to the Secretary of the Union :—

"Having read and considered your letter of the 17th inst., we reply that you are aware that the minimum basic wage rates of the piece and day labor of the trade are 27c. per hour in the city and 28c. per hour in Junction factories, and that though a considerable number of the men earn more under existing piece prices, manufacturers recognizing differences in the ability and industry on the part of many of their men, it is resolved that if the men now on strike at the Palmer Piano factory go back to work at the prices based on the above scale, except the flowers and oilers-off, to whom an advance of 29c. per hour be conceded, the existing conditions as to wages in the different factories be allowed to remain as at present ;

"*It being further resolved* that if the basis of 27c. per hour for rubbers and polishers in Toronto, and 28c. in Junction factories be not conceded by the Union, then notice is now given that all factories in both city and Junction will close on the evening of Friday, the 21st of October, and a re-adjustment of prices to be made in each factory, to arrange the wages on a scale more equitable to the manufacturer ;

"*Further*, as it is intimated that there is a misconception as to the wages actually paid in different factories, and as such a situation as would call for the closing of the factories would be a very serious matter, a committee of the manufacturers are willing to meet a committee of the men of the Union and discuss the matter with a view to clearing up misunderstanding and to arrange a settlement along the lines of the above resolution, it being requested that the Palmer Co. employees resume work pending the meetings of this committee."

In reply to this resolution the Union Executive appointed a committee and asked for a meeting with the manufacturers, at which they endeavored to prove their statement as to 30c. being the common rate. They were unsuccessful except in one instance, where certain circumstances had rendered it advisable for the manufacturer to pay the increase.

Being convinced of the determination of the manufacturers to abide by their resolution, they asked for time to advise the employees to return to work. On their return they reported they had spoken to the men, who refused to go back, and that they as a Union had no power to order them. The manufacturers then stated that their determination was final, and unless the men went back they would be obliged to shut down. The committee then asked for a conference between the striking employees and the Manager of the Palmer Co. As a result of this conference the men decided to return to work at the old wages in order to prevent a general shut down of the factories.

The seriousness of the position can be readily appreciated, when it is understood that the shut down would have affected over nine hundred men, and would have meant to them in wages between $12,000 and $13,000 weekly. The increase meant to the manufacturer an extremely heavy burden, and one which they could not concede to their competitors in trade.

EXECUTIVE COUNCIL MEETING POSTPONED

On account of the fact that the third Thursday in November falls on Thanksgiving Day, it has been decided to postpone the meeting of the Executive Council for one week It will be held on Thursday, November 24th, in the usual place of meeting, Board of Trade Building, Toronto

OBNOXIOUS LABOR LEGISLATION

Employers Dictated to in the Matter of Advertisements for Help

THE Alien Labor Bill, as introduced in the House of Commons by Sir Wm. Mulock, July last, contained a clause providing a penalty for the making of false representations tending to induce immigration. In the discussion of the bill it also came out that an amendment had been prepared at the instigation of the Rossland Trades and Labor Council, making it illegal for Canadian employers to advertise for help outside of the country.

The bill was of course thrown out, and these matters are, for the present at least, a dead issue, but it may be interesting to opponents of the bill to know that legislation of a similar character was not long since forced through the Legislature of Illinois, legislation the validity of which is now being tested in the Law Courts of that State.

The measure referred to made it a misdemeanor, punishable by fine or imprisonment or both, for an individual or firm to omit from an advertisement for help the fact that a strike or lock-out existed in his or its plant when such did exist.

One of the first prosecutions under this obnoxious statute is told of in a recent issue of *The Iron Age*. Some few weeks ago Jacob J. Walser, President of the Goss Printing Company of Chicago, was arrested at the instance of Labor Unions of that city for failing to state in an advertisement for men that a strike existed in his plant. His company is one of many in Chicago against which the International Association of Machinists is still technically waging a strike, though strike conditions long since ceased to exist. The Illinois Manufacturers' Association has championed the cause of Mr. Walser and the Goss Company, and has decided to embrace this opportunity of testing the constitutionality of the law. Section 1 of the statute reads as follows :—

It shall be unlawful to induce, persuade or engage workmen to change from one place to another in this State, or to bring workmen of any class or calling into this State to work in any of the departments of labor, through or by false representations, false advertising or false pretences concerning kind or character of work to be done, or amount or character of compensation, or sanitary or other conditions, or as to the existence or non-existence of a strike or other labor trouble pending between employers and employees at the time of or previous to such engagement.

Failure to state in any advertisement, proposal or contract for the employment of workmen that there is a strike, lockout or other labor trouble at the place of proposed employment when such strike, etc., exists, shall be deemed a false advertisement and misrepresentation for the purpose of this Act.

Section 2 provides for a fine not exceeding $2,000 or imprisonment in the county jail not exceeding one year, or both penalties, for violation of the above statute. Section 3 makes it a felony, punishable by imprisonment in the State penitentiary not less than one year or more than five years, for bringing armed workmen into the State. Section 4 gives the workmen the right of action for recovery of all damages and attorney's fees resulting from loss to him owing to false advertisement.

ANOTHER LIFT LOCK FOR THE TRENT CANAL

The announcement comes from Ottawa that tenders are being called for a $200,000 lift lock at Kirkfield on the Trent Canal. The location will be between Lake Simcoe and Balsam Lake, or about 100 miles from the Peterborough lift. The Kirkfield lock will be 130 feet long, and will overcome an elevation of 55 feet, being slightly smaller than the one at Peterborough. It will also differ from the Peterborough lock in that its towers will be of steel instead of concrete construction. Work will be pushed forward very rapidly, and it is expected that the lock, as well as that portion of the canal on which it is situated, will be completed by the fall of 1905.

Transportation Department

EAST AND WEST-BOUND RATES ON GENERAL MERCHANDISE.

A PRACTICE, which probably dates from the dawn of railroading in Canada, is continued in spite of the want of consistency or reason which surrounds it, from year to year not because the railways are not aware that the practice is unreasonable, and not because the attention of the railway managements has not been frequently drawn to the matter.

This practice is the making of west-bound rates on general merchandise lower than the rates for the transportation of the same merchandise in the opposite direction, between the same points. At present this refers exclusively to the rates between points in Ontario West and points in Eastern Ontario, Quebec and the Maritime Provinces.

EXAMPLE:

The east-bound winter rates from Toronto to Montreal and Ottawa, are based upon 1st class, 50 cents per 100 lbs., and 5th class, 25 cents per 100 lbs. The west-bound rates upon 44 and 22 cents, discriminations against the east-bound movement of 6 and 3 cents respectively.

The same discrimination applies to all points west of Toronto and south of North Bay. Take the case of London, from which to Montreal the east-bound 1st class rate is 66 cents and the 5th class rate 33 cents, while the west-bound 1st and 5th class rates are 50 and 25 cents, discriminations of 16 cents 1st class and 8 cents 5th class against the east-bound movement; and Windsor, the east-bound 1st class rate to Montreal is 70 cents and 5th class 35 cents, while the west-bound rates are 58 cents and 29 cents respectfully, discriminations against the east-bound tonnage of 12 and 6 cents per 100 lbs. respectively.

East and west-bound rates between points in Quebec, east and south of Montreal and points in eastern Ontario are all related to the Montreal rates: east of Montreal and north of Carleton Junction the same fixed rate additions are added to the Montreal rates whether the traffic be east or west-bound.

Between points in the Maritime Provinces the east and west-bound rates are also related to the Montreal rates, as the following examples will show:—

DISCRIMINATION TO THE MARITIME PROVINCES

The 1st class rate from Toronto to St. John, N B., is 70 cents, 5th class rate 35 cents. From St. John to Toronto, the 1st class rate is 64 cents, 5th class 32 cents, discriminations against the east-bound movement of 6 and 3 cents per 100 lbs. for 1st and 5th class respectively. The same discrimination applies in the rates between London or Windsor and St. John or Halifax; in fact, the discriminations exist against the east-bound tonnage throughout this territory.

WHY DO THEY EXIST?

It is difficult to conceive why these discriminations should be allowed to exist. Is it possible that the railways, who are able to act unanimously on other subjects cannot agree upon a reasonable course in the premises? The railway managements are not wanting in courage to grapple with the discrimination, which so long as it is allowed to exist, will be complained of by the manufacturers and shippers of the west.

THE WESTERN MANUFACTURER'S GOODS

It is not necessary to enter into arguments to show that to some extent the raw material of the western manufacturer has to be imported and carried into the west before his finished product can be shipped east, nor should it be necessary to draw attention to the fact that to an extent the general merchandise shipped east from Ontario has to compete with like goods arriving from beyond the seas through the port of Montreal or Quebec, for the Province of Quebec, and through Maritime Province ports, for New Brunswick and Nova Scotia. The markets of Nova Scotia are also supplied from the United States by goods shipped on low water rates from Boston. These conditions should establish the necessity from the railway standpoint of conceding equal rights, if the principle were not already established by the common definition or interpretation of justice.

EMPTY CAR MOVEMENT

The "empty car" movement has been quoted in times past as justifying the lower rates west-bound, but with respect to the empty car movement it is fair to say, and reasonable to expect that this should not be accepted as a factor in establishing general merchandise rates. If the empty car movement is to be a factor at all in rate making it can only reasonably be so with respect to the coarse traffic, such as raw material for factories and traffic, the movement of which may be encouraged without injustice to the community, such traffic as without the low rates would not move.

CHICAGO–NEW YORK RATES

The east-bound and west-bound rates between Chicago and New York were not always the same. The United States trunk lines put in effect for the first time in the year 1893 equal rates between Chicago and New York. As the movement of traffic in the intermediate territory is provided for by rates related to these Chicago-New York rates on a percentage basis, the east and west-bound rates within that territory are what might be called "practically the same" in both directions.

The Railway Commission commences November 1st proximo. to receive and approve the tariffs of the Canadian Railway. It is hoped that these local merchandise tariffs may not be passed upon and approved until this practice is stopped, this practice which, however reasonable it may have been when all the supplies of the west had to be shipped from the seaboard, is now entirely unreasonable when in the western peninsula of Ontario are located a large proportion of the manufacturing industries of Canada.

The following are extended examples of the discrimination against the east-bound rates (winter basis):

ONTARIO AND QUEBEC

	CLASS RATES IN CENTS PER 100 LBS.							
	1	2	3	4	5	6	7	10
Toronto to Montreal.....	50	44	38	31	25	23	19	17
Montreal to Toronto.....	44	39	33	28	22	22	17	15
Discrimination against east-bound traffic.....	6	5	5	3	3	1	2	2
Hamilton to Montreal.....	54	47	41	34	27	25	20	19
Montreal to Hamilton....	46	40	35	29	23	23	18	16
Discrimination against east-bound traffic.....	8	7	6	5	4	2	2	3
London to Montreal.....	66	58	50	41	33	31	23	22
Montreal to London.....	50	44	38	31	25	25	19	17
Discrimination against east-bound traffic.....	16	14	12	10	8	6	4	5
Windsor and Owen Sound to Montreal.....	70	61	53	44	35	33	24	23
Montreal to Owen Sound and Windsor.....	58	51	44	36	29	29	21	20
Discrimination against east-bound traffic.....	12	10	9	8	6	4	3	3

These are only isolated cases, but they are representative cases. The same discrimination exists against the whole system of east-bound class rates.

ONTARIO AND MARITIME PROVINCES

	CLASS RATES IN CENTS PER 100 LBS.							
	1	2	3	4	5	6	7	10
Toronto to Halifax	72	64	53	44	35	35	29	27
Halifax to Toronto	66	59	50	42	33	33	28	26
Discrimination against east-bound traffic	6	5	3	2	2	2	1	1
Hamilton to Halifax	76	67	58	48	38	38	31	30
Halifax to Hamilton	68	60	52	43	34	34	29	27
Discrimination against east-bound traffic	8	7	6	5	4	4	2	3
London to Halifax	88	78	67	55	44	44	34	33
Halifax to London	72	64	55	45	36	36	30	28
Discrimination against east-bound traffic	16	14	12	10	8	8	4	5
Windsor and Owen Sound to Halifax	92	81	70	58	46	46	35	34
Halifax to Owen Sound and Windsor	80	71	61	50	40	40	32	31
Discrimination against east-bound traffic	12	10	9	8	6	6	3	3

CANADIAN RAILWAY COMMISSION JUDGMENTS IN RATE-CASES

Among the complaints laid before the Board of Railway Commissioners, on their recent visit to Toronto, were the Almonte Knitting Company's complaint regarding coal rates, and the complaint of the Ontario millers of split peas regarding the rates upon split peas. Reference is made to these cases because the Board has just handed out judgments.

THE ALMONTE KNITTING COMPANY'S COMPLAINT AGAINST THE CANADIAN PACIFIC RAILWAY

This complaint involved the question as to what would be a reasonable rate from Suspension Bridge to Almonte, as compared with rates into territory adjacent to Almonte. The Canadian Pacific, from the outset, took the stand that $2.40 per ton to Almonte, seven miles north of Carleton Junction, was fair as compared with $2.00 per ton to Ottawa, Britannia, Stittsville, etc., Ottawa being twenty-seven miles northeast of Carlton Junction The railway management expressed the opinion that regardless of what rates were made from Detroit or Suspension Bridge, the coal would continue to reach Almonte *via* the St. Lawrence frontier. The Board would not allow weight to this contention, but expressed the belief that the rates to Almonte should be on a basis relative to the rates to adjacent points. Relativity, in this case, seems to involve practically no other conditions than mileage and cost of carriage.

The mileage to Almonte is less than the mileage to Ottawa. The expenses of transportation are not greater from Carleton Junction to Almonte, than from Carleton Junction to Ottawa or intermediate points. It is not plain, therefore, why the rate to Almonte should be even 20c. per ton higher than the rate to Ottawa. If the contention of the Canadian Pacific Company is correct that the coal must move across the St. Lawrence frontier, the measure of relief asked for by the Almonte factory, as far as it is concerned the railway would not lose any revenue and might have been granted with good grace by that company, since the probable effect of the concession upon the coal agents of Ogdensburg would be to make it necessary to retain the trade to reduce their price by 20c. per ton. The Canadian manufacturer would probably profit by the reduction and the Canadian railway would lose nothing, since its charge from Prescott is a fixed one. It does not appear that the position (that the coal must move *via* the St. Lawrence frontier), taken by the railway is correct. If it be correct, why does the railway publish rates from Detroit and Buffalo into this territory, and why did it, in June last, reduce its rate from Detroit to Ottawa and intermediate points, from $2.50 to $2.25 per ton? This publishing and reducing of rates does not give the appearance of an absence of trade *via* Detroit. If coal can be shipped *via* Detroit at the rates quoted by the Canadian Pacific Railway, the rate from Suspension Bridge being lower, it is not improbable that coal could be moved also *via* Suspension Bridge.

The Board refers to the custom of railways as justifying the breaking of groups from junction points in the fixing of higher rates into branch lines, but railway custom, an examination of tariffs will show, is erratic, often unreasonable, and by no means uniform and consistent.

Railway practice is, to some extent, to administer a species of punishment, by means of rates, to industries which locate off the main lines of transportation. There does not seem to be any good reason why this should be the case, specially so when the conditions surrounding transportation on the main lines are not of a special character. Manufacturers at Almonte and manufacturers elsewhere located, on main or branch lines, may be, and likely are, competing in the general market of Canada with manufacturers otherwise situated. It is due to these manufacturers, in the absence of those special conditions, such as water competition, which hold down rates between points affected thereby, that all places should be given a relative system of rates, both for inward raw material and fuel and outward finished goods; a system that considers the mileage traversed and the cost of transportation to various points. In the absence of relative rates, an unnatural restraint is imposed upon the growth of certain points to the injury in many cases of the country as a whole.

COMPLAINT OF THE MILLERS OF CEDAR LUMBER

The following judgment has been issued by the Board in connection with the discrimination against cedar lumber complained of by the lumber millers on the Pacific Coast. A report of this case was given in the October number of INDUSTRIAL CANADA.

"IN THE MATTER OF

The Complaint of the British Columbia Lumber and Shingle Manufacturers' Association against the Canadian Pacific Railway Company for discriminating in its freight rates on the lines of railway against cedar lumber :

Upon hearing the complainants, represented by W. H. D. Miller, Manager of the Transportation Department of the Canadian Manufacturers' Association, in support of the complaint, and Mr. E. P. Davis, K.C., Mr. J. E. McMullen and Mr. B. W. Greer, contra, and it appearing to the Board that a rate of 10 cents per one hundred pounds is imposed upon cedar lumber carried on the respondent company's line of railway, in excess of the rates charged upon other lumber, namely, pine, fir, spruce, and other kinds of lumber, which excess rate of ten cents is, in the judgment and opinion of the Board, an unreasonable and excessive charge upon cedar lumber as compared with the rates upon other lumber, and which unjustly discriminates against cedar lumber,

THE BOARD THEREFORE HEREBY ORDERS,

Under the powers conferred upon it by sections 253 and 254 of the Railway Act, 1903, that the Canadian Pacific Railway Company and all other railway companies do hereafter desist from charging a higher or greater rate of freight upon cedar lumber than is charged by them on pine, fir, spruce, and other lumber of like class ; and the Canadian Pacific Railway Company and all other railway companies are hereby charged forthwith to give effect to this order."

CLASSIFICATION OF FREIGHT

Freight classification, affecting directly a large proportion and indirectly almost the whole of the railway freight tonnage of Canada, will engage, more and more, the attention of the shipping public as the importance of transportation is brought home to manufacturers and shippers.

It is the purpose to consider the various classifications which affect the Canadian shipping and transportation interests, and to express some views with regard to making or fixing of classification.

NUMBER OF CLASSES

It might be supposed, after considering the class rate tariffs connected with various classifications, that there were in the Canadian classification but ten classes, in the Official classification of the United States but six, in the Western classification, also of

the United States, but ten classes. In these classifications additional classes are provided for light, bulky, valuable or dangerous goods, based upon the first class; for example: first and a half class, double first, three times first, and four times first. There are also in the Official Classification two additional or intermediate classes known as Rule 25, falling between second and third class (15% off second class rates), and Rule 26, falling between third and fourth class (20% off third class rates). These intermediate classes were the outgrowth of an advance in the ratings of certain commodities (at one time third or fourth class) which were advanced one class by the Committee of the Official Classification. These new classes represent the compromise resulting upon the protests of manufacturers and shippers.

CLASSES—LIMITED

With the limited range of classes afforded in these classifications, it is not always an easy task for the Railway Classification Committees to decide into what classes commodities should be sorted. The classifying is rendered more difficult where the commodities themselves assume various forms or are put up in packages of various kinds.

WELL DEFINED PRINCIPLES NECESSARY

These difficulties emphasize the necessity of having clear well-defined principles upon which to work. The elements or factors of classification should be clearly laid down, so that all commodities which are to be classed may be passed upon and assigned each its proper rating, according to a well-defined plan

DIFFICULT TO SAY PLAN OF CLASSIFICATION

How far the classifications of the past or the classifications as they exist to-day were constructed upon well-defined principles, it is difficult to say. It is possible to say that in some cases the various elements have not been properly balanced, if they have been considered at all.

OFFICIAL CLASSIFICATION

The Official Classification, in use in the United States east of Chicago and north of the Ohio and Potomac Rivers, took the place, with the inauguration of the Interstate Commerce Commission, of 131 local classifications in use on about as many railways and the place, also, of half a dozen classifications as applied to particular movements of traffic; such, for instance, as the traffic moving from Chicago to New York.

GROWTH OF CLASSIFICATION

The growth of classification and the principles upon which it should be made, are illustrated by the dissertation upon the subject. covered by Part 2 of the "Forty Year Review of the Changes in Freight Tariffs," published last year by the Interstate Commerce Commission. Before quoting from this report, it is worth remarking that the power of the Interstate Commerce Commission is the power of criticism rather than of regulation. In this respect it differs from the power vested by the Railway Act of 1903 in the Railway Commission for Canada. The Canadian board is clothed with a degree of regulative power.

INFLUENCES IN MAKING CLASSIFICATION

In considering freight classifications wherever they are in effect, it is important to bear in mind the influences under which each classification is established. The Official Classification shows little direct results, since its birth, of the influence of the Board at Washington. That there have been indirect results cannot be gainsaid. The power of criticism and the educative power of the federal board gradually tells. The interest manifested, not in classification alone, but in the general questions of transportation, by the shipping public of the United States is largely due to the work of the Interstate Commerce Commission.

A FORTY YEAR REVIEW OF FREIGHT RATES IN THE UNITED STATES

The United States Board in their report, above referred to, discussed classification. To quote from this report: "It was discovered early that the charges for transportation of different articles of freight could not be apportioned among such articles with regard alone to the cost of carriage. This basis of determining the charges, it was found, would confine to narrow limits the movement of different articles whose bulk or weight was large in comparison to their value, while heavier articles with less bulk would be made to pay proportionately low rates. Under the system of apportioning charges directly to the cost some kinds of commerce which have been very useful to the country and have a tendency to bring different sections into more intimate business and social relations could never have attained to any considerable magnitude and in some cases could not have existed at all, for the simple reason that the value at place of delivery would not equal the purchase price with the transportation added. Traffic would thus be precluded because the charge for carriage would be greater than it could bear. On the other hand, the rates for the carriage of articles, which with small bulk or weight, concentrated great value would, on that system of making them, be absurdly low when compared to the value of the article and perhaps not less so when the comparison was with the value of the service of transporting them.

VALUE OF SERVICE

"Accordingly, it was found not to be unjust to distribute the entire cost of service on a basis that gave greater consideration to the relative value of the service than to the cost.

ELEMENTS OF CLASSIFICATION

"The following are laid down by the Board as elementary factors in classification: (1) *The competitive element;* (2) *The volume of business;* (3) *The direction in which the freight moves;* (4) *The value of the article;* (5) *The bulk and the weight;* (6) *The degree of risk attending transportation;* (7) *The facilities required for particular or special shipments;* (8) *The facilities required for a general tonnage of a particular commodity;* (9) *Analogy;* (10) *Compromise (in some of the classifications of the United States);* (11) *What the traffic will bear.*"

CLASSIFICATION AND EVOLUTION

It is apparent to any one who has considered the matter that classification is an evolution. Even the Official Classification, as stated above, has for its foundation the 130 or more local and particular classifications. Of these various elements laid down by the Interstate Commerce Commission, while all may have entered to a degree into the construction of the Official Classification, some at least could have done so only through the influence which they had in the construction of the local classifications upon which the Official Classification was based.

UNIVERSAL ELEMENTS

Some of the elements are of a universal application; the bulk, weight, value, the degree of risk attending transportation, the facilities required and what the traffic will bear. The volume is of general application only in so far as the volume is measured, for a carload or a less than carload rate, because the United States Commission has ruled—and very properly so—that the only differentiation of rates should be for carload and less than carload quantities.

WHAT THE TRAFFIC WILL BEAR

What the traffic will bear is an important universal factor. Its application is not, as some suppose, the careful examination of all commodities to ascertain the limit of their capacity to bear freight charges. "What the traffic will bear" enters into the making of classification as a national necessity. The cost of transportation must be so distributed as to produce at once reasonable returns to the railway companies and the highest advantage to the communities they serve. The economic and transportation conditions to-day favor the movement of certain kinds of traffic, usually low grade, at but little more than the cost of carriage. What surplus of revenue is due from, but cannot be earned upon this tonnage in which all are interested, which will not stand higher rates, must be made good by the high grade traffic which is able to stand reasonably high rates.

ELEMENTS NOT UNIVERSAL

The competitive element, the direction of tonnage and even compromise may be considered as factors in the making of small, local or district classifications of individual and, to some extent, small lines. In the construction of a general classification like the Official Classification or the Canadian Freight Classification, these elements are not universal factors unless they can be applied universally throughout the territory covered by the classification. The competitive element might be local in Ontario; for example: Ontario shippers might be in close competition with the shippers of Michigan or New York, a competition encouraged by the classification in force from those States and low class rates. The same competition might not exist in the other provinces. It would not be fair to the railways nor fair to the general public that the low rate required and established for the particular competition in Ontario should be extended throughout the Dominion. The same might be said about the movement of tonnage, if it is a factor in the construction of classification. It cannot be a factor in the construction of general classification covering a broad territory. The direction of tonnage varies and is a local or territorial condition. Where it is considered with respect to a particular territory as a factor in making a small local classification, it should not appear as a factor unless it has reference to a variety of tonnage which would require a low commodity or class rate to provoke its movement, which, without a low class or a low commodity rate would not be moved. The movement of such tonnage should not be encouraged to the disadvantage of other shippers.

ANALOGY ILLUSIVE

Analogy is rather an illusive factor. Commodities should be classified according to the manner in which they fit into the legitimate elements of classification. It should not be left to individuals to decide what is analogy and what is not.

COMPROMISE

Compromise is not a fair element of classification. It is difficult, even in a small territory, and impossible in a large territory, for railway companies to compromise with one party or group of parties without the probability of doing some injustice.

COMPETITIVE ELEMENT

It will be observed that of the various objectionable elements only one, the competitive element, can reasonably be admitted into the making of classification, and then it should be admitted only when the competition is as general as the classification.

THE CANADIAN CLASSIFICATION

In considering the Canadian Classification, it is possible that succeeding Classification Committees have not measured commodities by these elements with the care that the circumstances warrant. One would also have to take account of the extent to which, in making this Classification, the classifications of the United States have played a part.

VOTINGS IN COMMITTEE

The system of voting in Committee, one vote for each representative, gives to the larger lines some measure of what is due to larger interests. The alternative system (one line, one vote) would give an undue influence to smaller roads and arm their representatives with power to impose, if disposed to do so, unreasonable conditions. Combination is easy in proportion as the number of the interests to be combined is small. There is a danger of one road or even one party dominating the deliberations, not necessarily by attendance, but by instructions to delegates. These instructions may be influenced, as the Interstate Commerce Commission points out, by a question of policy rather than by the determination to deal out what is due to the public. At times this domination may counteract individuality and override expert knowledge and practical experience. In future the various operations of these railway committees can be examined, on complaint, by the Canadian Railway Commission. Herein is provided a much needed protection for the public.

RAILWAY RESPONSIBILITIES

Two points the Canadian roads should bear prominently in mind in making classification are,—first, the public character of their tariffs and the necessity of being fair as between patrons—second, their responsibility for the up-building of Canadian communities.

RESPONSIBILITIES OF COMMITTEES

To the Canadian Customs Tariff is due to a large extent the importance of Canada to-day from a manufacturing standpoint, and according as the country is prepared to extend the manufacturing of its wants, to that extent the Customs Tariff should be sympathetic and protective.

The responsibility which devolves upon the framers of a customs tariff is not much greater than the responsibility which falls to the classification and freight committees of the railway companies. Through the fixing of classification and the making of rates the Canadian industries may be to a large extent either made or marred.

RAILWAY OFFICIALS PROTECTIONISTS

It is hardly to be supposed that the railway officials are otherwise than protectionist in their views, at least so in the interests of their properties. There is no question as to which results more favorably to the transportation company, the home manufacture or the importation of manufactured goods from abroad. For this reason and for the true conservation of their interests; which follows upon a national construction of tariffs and classifications, in the making of classifications and tariffs, the disposition to be liberal should be entirely in the direction of the home manufacturer or shipper, in the consideration of his raw material or manufactured output.

UNITED STATES CLASSIFICATIONS

In some of the various discussions on classification before the Railway Commission, it has been necessary to quote, to assist in sustaining the contentions of the Association, the ratings established by the committees of the Western or Official Classifications. These ratings are urged as factors in the discussions rather than as controlling reasons, They are urged to support the contentions of the association, in its views, which without the support of these classifications, would still be the same. It is not to be supposed that elements of unfairness do not exist in the classifications of the United States. Probably they exist, if not to a greater extent, to as great a degree as in the Canadian Freight Classification. The classification of Canada, too, will doubtless continue to improve with the assistance of the Board and with the broader understanding among the public, and with the railways, of the principle upon which the classification should be made. The United States classifications, on the other hand, except in as far as they are made by commissions with power (to a limited extent only does this condition obtain), cannot be considered, with respect to the ratings of individual commodities, as by any means perfect.

UNIFORMITY OF CLASSIFICATION

In the United States the tendency of classification toward uniformity is expressed in the consolidation of the various local classifications into the broader Official Western or Southern Classification. The aspirations and efforts of the Interstate Commerce Commission, for several years, have been in the direction of securing a uniformity. In Canada the advantage is already secured, The Canadian Classification applies from one end of the Dominion to the other. This uniformity should be carefully preserved. It should be departed from only where conditions exist (such as competition from the United States) which make it essential that with respect to particular territories and commodities reduced ratings should be granted. In this case, the same practice as obtains in Official classification territory, of making territorial exceptions sheets to the general classification, might reasonably be adopted.

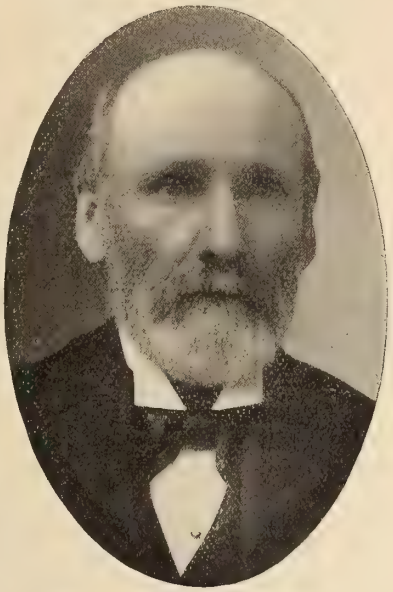
AGENCIES WANTED

Advertiser (Scotchman) returning shortly to the Old Country will be glad to correspond with leading makers or manufacturers of woolens or fancy goods, with the view of representing them there; has influential connection among the principal merchants and shippers of London, Manchester and Glasgow, also among the larger cities of England, Ireland, Scotland and the Colonies. Send replies to Box H., INDUSTRIAL CANADA, Toronto.

Industrial Activities OF THE MONTH

Contributions of interesting news items are invited

THE MANUFACTURERS OF CANADA



NO. 7.—ROBERT McLAUGHLIN

Robert McLaughlin, founder of The McLaughlin Carriage Co., was born in 1837 in the County of Durham, Ontario. After thirty years spent upon the farm and in lumbering, he embarked upon a business career by building, in the Village of Enniskillen, a small wooden carriage-shop. The first year his staff of workmen consisted of one blacksmith and one apprentice, with whose help he turned out eight wheeled vehicles and about as many sleighs.

During the succeeding nine years enlargements were made to this primitive structure from time to time, and his staff was added to in proportion as the sale of buggies increased.

In 1878 Mr. McLaughlin moved to Oshawa, where he erected a substantial three story brick factory, in which about thirty men were employed. Still his business continued to expand, and addition after addition was built to his plant until, in 1888, extension came to an end for want of room on the lot. At this date the large premises of the Oshawa Cabinet Factory were acquired. At the same time two sons, G. W. and R. S., who had served a regular apprenticeship under their father, were taken in as partners.

From now on the firm devoted their energy to the wholesale trade, which grew very rapidly. On the 7th of December, 1899, there were 280 employees on their pay roll, but on that night the entire buildings and plant were destroyed by fire. With characteristic energy Mr. McLaughlin at once undertook the work of reconstruction, while the junior members of the firm equipped and operated a temporary establishment in Gananoque. By November, 1900, their two main buildings were completed, and before Christmas of the same year 2,400 cutters had been made and disposed of.

Since then, it has frequently been found necessary to enlarge the plant, which is to-day recognized as the best and largest in the country. The factory proper has a floor space of 176,500 sq. ft. and is built on the fireproof sprinkling system plan with hardwood floors. From 375 to 400 hands are employed, of whom 350 are skilled operators. During the Company's last fiscal year over 14,000 vehicles were manufactured, which were sold in every part of Canada, in South Africa, Australia, New Zealand and the British Isles.

On being asked how he accounted for the fact that from such a small beginning he had built up such a tremendous business, Mr. McLaughlin, with his accustomed modesty, replied that it was more of a wonder to himself perhaps than to anyone else. Personally he is inclined to give most of the credit to his two sons, who have put their entire energy into a business in which they received a thorough training in their early years. He himself, however, is a firm believer in the principle that there should be one grade only and that the best, and to his constant endeavor to excel in quality and style much of his success must surely be attributed.

For a number of years he has served his town as councillor, school trustee and mayor. He is also a faithful member of the Executive Council of the Canadian Manufacturers' Association, and always takes a deep interest in all matters relating to the welfare of the manufacturing industries of Canada.

As proving their claim that "The sun never sets on The Canadian Airmotor," the Ontario Wind Engine and Pump Co. write that a few years ago they sent one of their Airmotors on the S.S. "Discovery" to the Antarctic regions; more recently two outfits were purchased for Captain Bernier for his expedition to the North; a large shipment has just been forwarded to Pretoria, South Africa, and another to the British Government at Larnica, Cyprus, while quotations have been furnished prospective buyers in Australia and on the West African Gold Coast.

The elevator of the Ogilvie Flour Mills Co., at Fort William, is now handling grain and will soon be finished. The company has let the contract for a 3,000 barrel flour mill on an adjoining site. When completed it will be one of the most up-to-date on the continent.

The International Harvester Co. is erecting a large warehouse, show rooms and office building in Winnipeg.

A. E. Rea & Co. are building a five story brick warehouse on Spadina Ave., Toronto, at a cost of $35,000.

Work is being pushed rapidly ahead on the immense dam for the Koochiching Power Co., at Fort Frances, Ont. It is estimated that 4,000,000 ft. of lumber will be required for the coffer dams alone, which in some places will be 70 ft. deep.

Mr. Lewis, of Cardiff, South Wales, and Mr. Allison, of New York, are among the promoters of a new company, which will put up an extensive factory in Toronto for the manufacture of a certain class of goods connected with the tin trade. These goods now enter the country free of duty, and the Government will be asked to protect the new concern with a small tariff.

An interesting description of the plant of the Montreal Cotton Company is contained in the *Textile American* for September.

The J. I. Case Thresher Co., Chicago, have purchased a $10,000 site facing the Kaministiquia River, Fort William, where they will shortly start work on the erection of a large plant for the manufacture of threshing machines and farm implements. It is expected that they will employ about 400 men to start with, houses for whom will probably have to be built by the company.

The Booth Copper Co., Toronto, have opened a branch office and factory at 120 William St., Montreal.

The Canada Car Company announce their intention of building an enormous plant in Montreal. It will cover 360,000 sq. ft., and will have a daily capacity of 15 steel cars, 25 box cars, and 15 passenger coaches. In addition the works will turn out underframes for cars and steel truck frames. They will employ at the outset from 1,500 to 2,000 men, and will have an annual turn-over of eight millions.

Welford Bros., of London, whose broom and brush factory was destroyed by fire some time ago, are considering the question of removing to Norwich.

An English syndicate, headed by one J. Breeze, is negotiating with the holders of some ninety mining claims along Bullion Creek, in the Alsek district, with a view to working them on a percentage basis. Patent thawing machines will work on the gravel all winter, and in the spring a monster flume will be built, and washing operations carried out on a large scale.

Work will be commenced at once on the double-tracking of the C.P.R. between Fort William and Winnipeg.

A statement was made in the October INDUSTRIAL CANADA to the effect that the Singer Sewing Machine Co. were building a new plant at St. John, N.B. This should have read St. John's, P.Q. There will be twenty-two buildings in all, most of which are now well under way. They include a four-story machinery shop, 600 x 60 ft., a four-story cabinet factory, 750 x 60 ft., a two-story Japan and ornamental building, 150 x 60 ft., a foundry 400 x 100 ft., a forge department, 150 x 60 ft., besides a shipping department and several other buildings. The cabinet work will be manufactured from the log, and the machines from the pig iron. The magnitude of the undertaking is a striking indication of the faith the United States management have in the future growth of Canada.

The old Lybster Cotton Mills, Merritton, has been taken over by the Lincoln Paper Mills Co., Ltd., who will spend $250,000 in converting them into an extensive paper factory.

The Canadian Locomotive Co., Kingston, will build twenty-five Richmond compound mogul freight locomotives for the Grand Trunk this winter. The order was received in competition with some of the strongest United States companies.

Mr. George H. Hees, an article from whose pen appears in another column, will leave with Mrs. Hees early in December to spend the winter in Egypt, including a trip up the Nile and through the Holy Land. They will spend some time in Athens, Constantinople and Naples, and will also visit England before their return. They will be absent five or six months.

New Westminster is spoken of as the probable location of the immense plant of the Delta Mills, Limited. The town is also happy in the prospect of a large wharf and elevator being built by the Brackman-Ker Milling Co.

Persistent rumors continue to circulate with regard to the existence of a large body of red hematite ore in the vicinity of Steep Rock Lake, which is about 150 miles west of Port Arthur on the line of the new Canadian Northern.

Exemption from taxation for ten years is the concession which has induced the Carney Lumber Co. to locate at Owen Sound. They will erect and equip a mill with a capacity of twenty million feet, which will give employment to 200 men.

The United States Steel Corporation are said to be considering plans for the establishment of a rail mill in Canada. The recent imposition of a duty of $7.00 per ton has practically compelled them to take this step if they are to protect the business they already enjoy in this country.

A large abattoir, cold storage and pork packing plant will be built at Vancouver in the near future by P. Burns & Co., the biggest wholesale butchers and packers in the North-West. The plant will cost in the neighborhood of $150,000.

What promises to be one of the finest tanneries on the continent is being erected at Newmarket, Ont., by A. Davis & Son, Ltd. It will be equipped with the most modern appliances procurable. The heating and ventilating systems are said to be especially effective. The walls are of solid cement.

The Alaska Feather & Down Co., Montreal, have let the contract for the erection of a solid brick warehouse and factory on Princess Street, Winnipeg.

The Kamloops Lumber Co. have installed an electric light plant in their mill at Enderby, B. C.

East & Co. have built a large addition to their trunk factory in Toronto. They now have a frontage of 200 ft., and their capacity is double what it was before.

The new plant of the Metal Shingle & Siding Co., Preston, was destroyed by fire some three weeks ago, involving a loss of $30,000. This is the second misfortune that has overtaken this firm in the last few months.

A $400,000 lumber mill will be put up in the near future at Staples, near Cranbrook, B. C., by Otis Staples, of Stillwater, Minn.

TRADE PUBLICATIONS

Doors.—The New Century Refrigerator and Manufacturing Co., Ltd., Dundas, are distributing a booklet illustrating a number of varieties of hardwood veneer doors, with suggestions for style and arrangement of panels. They carry a great many lines in stock, but give special attention to architects' designs and selected woods. The styles shown are thoroughly up-to-date, and every door is backed by the company's personal guarantee.

Engraving.—The Toronto Engraving Co. have issued a neat little brochure to announce the fact that they are introducing into Canada something entirely new and artistic in the way of fashion illustrating. By employing models to pose, and working from the goods themselves, they claim to be able to obtain a result possible in no other way. Samples reproduced are extremely life-like and natural ; they are, in fact, their own best advertisement.

Grinding and Polishing Wheels.—A new catalogue, fresh from the press, has just come to hand from the Hart Corundum Wheel Co., Hamilton. The array of medals reproduced on the front cover is reassuring to begin with, and the matter which follows is not disappointing. Several pages are devoted to a discussion of the relative merits of emery and corundum wheels. Figures are quoted showing the results of tests conducted at the Case School of Applied Science, from which it would appear that the stress and speed factors of safety are very high in the case of the Hart Wheel. All kinds of grinding, filing, sharpening and polishing machinery are illustrated and described.

Incubators.—" How to make Dollars out of Chicks " is the seductive title to a splendid piece of advertising literature gotten out by the M. Campbell Fanning Mill Co., of Chatham, Ltd. The question of the profits to be made by raising poultry is one upon which some very different opinions exist, but he would be a pessimist indeed who failed to be enthused after reading this company's booklet through from beginning to end.

Skylights.—A four page folder, entitled " Some Light on Skylights," has a great deal to say about the " Improved " variety manufactured by A. B. Ormsby, Limited, Toronto. It tells the materials they are made of, how they are rendered fire-proof, dust-proof and waterproof, what the pitch should be, how the curbs should be made, and reviews the advantages secured through their principle of expansion and contraction.

Women's Garments.—S. F. McKinnon & Co., Toronto, have issued a catalogue illustrating Fall and Winter styles of ladies' cloaks, capes and skirts. The state that their experience has gone to show that the superiority of " Made in Canada " garments is being more fully recognized every season, a sentiment to which every loyal Canadian will respond with a hearty " Hear, hear." As for the styles themselves, doubtless they are quite correct, but they certainly afford striking evidence of the fact that woman is fearfully and wonderfully made.

THE SOUTH AFRICAN PREFERENCE

Complete Tariff of the South African Customs Union, Showing Articles upon which Canada will enjoy a Preference

BELOW will be found the complete text of the tariff adopted by the South African Customs Union at Bloemfontein, in March, 1903.

It will be remembered that arrangements were made by the Dominion Government with the parties to the South African Convention in July last, whereby a mutual preferential tariff went into immediate effect. The extent of the preference, so far as Canadian shippers are concerned, is set forth in the following regulation:

"A rebate of Customs duties shall be granted on any goods and articles the growth, produce or manufacture of Canada, imported therefrom into this Colony for consumption therein to the extent following:

In the case of goods and articles liable to Customs duty under Class I., II., or V. of Schedule B, a rebate of 25 per cent. of any duty chargeable thereon at an *ad valorem* rate, but of no other duty; and,

In the case of goods and articles liable under Class III. of Schedule B to duty at an *ad valorem* rate of 2½ per cent. a rebate of the whole of such duty."

It will be observed that the preference applies only to goods paying an *ad valorem* rate.

The Colonies comprising the South African Customs Union, parties to the Preferential, are: Cape of Good Hope, Natal, Orange River Colony, Basutoland, Transvaal, South Rhodesia, and Bechuanaland Protectorate.

The various commodities embraced under the headings Class I, Class II, etc., together with the respective amounts of rebate allowed thereon, may be ascertained by reference to the following schedules:

CLASS I—Special Rates

		£	s	d
1	Ale, beer and cider; all kinds of strength exceeding 3 per cent. of proof spirit, Imperial gallon (and in addition ten per cent. *ad valorem*).	0	1	6
2	Acetic acid, Imperial gallon	0	3	0
3	Animals, viz.:			
	(*a*) Cattle for slaughter ..... each	1	10	0
	(*b*) Sheep for slaughter ..... do.	0	5	0
4	Beads, known as "Kaffir beads" ..... lb.	0	0	6
5	Blasting compounds, including all kinds of explosives suitable and intended for blasting, and not suitable for use in firearms; and collodion cotton not intended for manufacturing purposes ..... lb.	0	0	1½
6	Butter, butterine, margarine, ghee and other substitutes for butter ..... lb.	0	0	2
7	Chicory and substitutes for coffee or chicory ..... do.	0	0	2
8	Coffee:			
	(*a*) Raw ..... do.	0	0	0¾
	(*b*) Roasted, ground or mixed ..... do.	0	0	2
9	Cocoa and chocolate unsweetened ..... do.	0	0	1
10	Cocoa and milk, chocolate and milk, coffee and milk do.	0	0	1
11	Condensed, desiccated or preserved milk or cream .... do.	0	0	0½
12	Coals ..... ton of 2,000 lbs.	0	3	0
13	Coke and patent fuel ..... do.	0	2	0
14	Confectionery, including sweetened cocoa or chocolate, honey, jams, jellies, preserves, sweetmeats, candied or preserved ginger or chow-chow; and all other kinds compounded, made or preserved with sugar, but not including purely medicinal preparations properly classed as apothecaryware ..... lb.	0	0	2
15	Corn and grain, viz.: Barley, maize, millet, oats, rye, wheat, beans and peas:			
	(*a*) In the grain, or (*b*) crushed, flaked, ground, hulled, malted, pearled, split or otherwise prepared, except oats not in the grain and bran ..... 100 lbs.	0	1	0
	(*c*) Flour, wheaten, or wheaten meal, including pollard do.	0	2	0
16	Dates ..... lb.	0	0	0½
17	Fish: Cured, dried, pickled, preserved, pressed or smoked, not being of South African taking ..... lb.	0	0	1
18	Fodder, viz.: Chaff, hay, lucerne, oat-hay and other fodder, not otherwise described, but not including bran .. 100 lbs.	0	1	0
19	Fruits: Preserved, of all kinds, bottled, tinned or otherwise preserved, including pulp and candied peel ..... lb.	0	0	2
20	Fruits: Dried, of all kinds, including almonds and nuts do.	0	0	2
21	Gunpowder and other explosives suitable for use in firearms (and in addition ten per cent. *ad valorem*) lb.	0	0	6
22	Guns and gunbarrels, firearms:			
	(*a*) Single ..... barrel	1	0	0
	(*b*) Double and other ..... do.	0	15	0
	(and in either case in addition ten per cent. *ad valorem*)			
23	Meats, including lard, fats, soups, and other similar substances used as food, but not including extracts and essences or tallow ..... lb.	0	0	1
24	Matches:			
	(*a*) Wooden: In boxes or packages of not more than 100 matches ..... gross of boxes or packages	0	2	0
	In boxes containing more than 100, but not more than 200 matches ..... gross of boxes or packages	0	4	0
	And for every 100 additional matches, in boxes or packages, gross of 100 matches	0	2	0
	(*b*) Fusees, vestas or wax matches, or other patent lights used as such: in boxes or packages containing not more than 50 ..... gross of boxes or packages	0	2	0
	In boxes or packages of more than 50 but not more than 100 ..... gross of boxes or packages	0	4	0
	And for every 50 additional in boxes or packages, gross of 50 matches	0	2	0
25	Onions, not preserved ..... lb.	0	0	0½
26	Pickles, sauces, chutneys, chillies and other condiments do.	0	0	2
27	Pistols and revolvers ..... each	0	5	0
	(and in addition ten per cent. *ad valorem*).			
28	Soap, not including toilet soaps and soap powders and extracts ..... lb.	0	0	0½
29	Spices and tumeric ..... do.	0	0	2
30	Spirits:			
	(*a*) Perfumed ..... Imperial gallon	1	0	0
	(*b*) Liqueurs and cordials exceeding 3 per cent. of proof spirit ..... Imperial gallon	0	15	0
	(*c*) Other sorts, exceeding three per cent. but not exceeding the strength of proof by Sykes' Hydrometer and so on in proportion for any greater strength .. Imp'l gallon	0	15	0
	(and in addition ten per cent. *ad valorem* on all the above classes of spirits)			
31	Sugar:			
	(*a*) Not refined, golden syrup, molasses, saccharum and treacle ..... 100 lbs.	0	3	6
	(*b*) Refined ..... do.	0	5	0
32	Tea ..... lb.	0	0	4
33	Tobacco:			
	(*a*) Cigars and cigarillos ..... do.	0	6	0
	(and in addition ten per cent. *ad valorem*).			
	(*b*) Goorak or Goorakco, and Hookah mixture, and all imitations or substitutes ..... lb.	0	6	0
	(*c*) Snuff ..... do.	0	4	0
	(*d*) Cigarettes ..... do.	0	4	0
	(and in addition ten per cent. *ad valorem*).			
	(*e*) Manufactured and cut ..... do.	0	3	6
	(*f*) Manufactured but uncut ..... do.	0	3	0
	(*g*) Not manufactured but stemmed ..... do.	0	2	6
	(*h*) Not manufactured and unstemmed ..... do.	0	2	0
34	Vinegar:			
	(*a*) Of standard strength, fit for immediate use as such (*i.e.*, requiring no more than 40 grains of bicarbonate of potash to neutralize one ounce Troy):			
	(1) In bottles or other vessels of the capacity of not more than one Imperial quart ..... Imperial gallon	0	1	0
	(2) In larger vessels or in bulk ..... do	0	0	6
	(*b*) Concentrated extract or essence, of greater strength than above ..... Imperial gallon	0	3	0
35	Wine:			
	(*a*) Still wines not exceeding 20 per cent. of proof spirit ..... Imperial gallon	0	4	0
	(*b*) Still wines exceeding 20 per cent. but not exceeding 50 per cent. of proof spirit ..... Imperial gallon	0	8	0
	(*c*) Sparkling wines ..... do.	0	12	6
	(and in addition ten per cent. *ad valorem* on all the above classes of wine).			
	Note—Wines containing less than three per cent. of proof spirit are not iucluded in the above and wines containing more than 50 per cent. of proof spirit are classed as spirits.			

CLASS II—Mixed ad valorem Rates

		£	s	d
36	Bicycles, tricyles and velocipedes and parts thereof ... £100	12	10	0
37	Blankets and sheets, or rugs, cotton or woollen, or manufactures of cotton and wool, commonly used as cotton or woollen blankets or rugs, the single article in pairs or in the piece; and coats, jackets, or other apparel made of blanketing or baize £100	25	0	0
38	Bon-bons, surprise packets and crackers, and other similar fancy confectionery £100	25	0	0
39	Cards, playing ..... do.	25	0	0
40	Carriages, carts, coaches, wagons and all other wheeled vehicles, not elsewhere described, intended for the conveyance of persons or goods, including finished parts thereof, not being metal parts, not usually made in the Union, but required in the manufacture of wheeled vehicles therein; but not including bath chairs, perambulators, toy carts, store trucks or barrows £100	12	10	0
41	Extracts and essences of all kinds for flavoring or perfumery, including saccharine £100	25	0	0
42	Fireworks of all descriptions ..... do.	25	0	0
43	Medicines, patent or proprietary ..... do.	25	0	0
44	Motor vehicles, including their parts, and motor cycles, but not including traction engines and power lorries £100	5	0	0
45	Oils, essential or perfumed ..... do.	25	0	0
46	Perfumery, cosmetics, dyes, powders and soap, and other preparations for toilet use, and soap powders and extracts £100	25	0	0
47	Shawls ..... do.	25	0	0

CLASS III—Ad valorem 2½ per cent.

48 Acids: nitric and sulphuric.
49 Asbestos packing and boiler composition.
50 Assay apparatus.
51 Bands and belting of all kinds for driving machinery, boiler tubes, bolting cloth and mill silk.
52 Battery cloth and baize, gauze, matting, sieving and screening for use in connection with machinery and apparatus.
53 Bolts, nuts and rivets.
54 Bottles and jars of common glass or earthenware, and bottles ordinarily used for aerated waters: empty.
55 Chain for hauling.
56 Chimneys: metal (smokestacks).
57 Corks and bungs, and corkwood unmanufactured.
58 Cranes, elevators and shears.
59 Crucibles, cupels, cupelling furnaces, ingot moulds, retorts and furnaces for roasting minerals.
60 Cyanide of potassium.
61 Fire escapes and fire hose and hose reels.
62 Hose: steam, suction and armored (not including garden), for use in connection with machinery and apparatus.
63 Machinery, not elsewhere described, to be driven by cattle, electric, gas, heat, hydraulic, pneumatic, steam, water or wind power, including spare parts; and apparatus and appliances used in connection with the generating and storing of electric power or gas; electric cable or wire and the posts for carrying the same; lamp posts and their fittings.
64 Mining buckets, skips, trucks and tubs, wheeled or otherwise, for hauling on rails or wires.
65 Packing and lagging for engines, machinery and piping.
66 Pipes, piping and tubes of all kinds for gas, steam, drainage, sewerage, irrigation, water supply or pumping, not including downpiping and guttering or cocks and taps.
67 Railway construction or equipment requisites as follows:—rails, sleepers, fastenings for rails or sleepers, girders, iron bridge work, culvert tops, locomotives, tenders, ballast trucks, goods wagons, carriages, trolleys, engine water-tanks, turn-tables, permanent or fixed signals and weigh-bridges.
68 Rubber for use in connection with machinery and apparatus.
69 Tanks and vats suitable and intended for mining purposes.
70 Telegraphs and telephones:—materials and instruments for use in construction and working of telegraph and telephone lines.
71 Traction engines and power lorries.
72 Tramway construction and equipment requisites as follows:—rails, sleepers, fastenings for rails or sleepers, iron gates, girders, iron bridge work, culvert tops, cars, trolleys, water-tanks and turn-tables.
73 Wire and wire netting for fencing; droppers, gates, hurdles, posts, standards, strainers, staples, stiles, winders and other materials or fastenings of metal ordinarily used for agriculture or railway fencing; and baling wire.
74 Wire rope.

CLASS IV—Free

75 Agricultural implements and machinery, and all apparatus and plant usually and principally employed in farming operations; binding twine and harvest yarn.
76 All raw produce of South Africa, and animals bred in South Africa imported into the Union overland.
77 All animals bred and articles grown, produced or manufactured within the Union except:
(*a*) Flour, wheaten, or wheaten meal, including pollard, manufactured from other than South African wheat.
(*b*) Spirits, beer, or blasting compound, distilled or manufactured in the Union, should a duty be imposed under Article XVII of the Convention.
78 Ambulance materials imported by recognized associations, corps or hospitals lawfully established for instruction or drill in first aid to the wounded.
79 Anchors and chain cables for the use of ships, tugs, or lighters.
80 Animals living, except cattle and sheep for slaughter.
81 Arms, ammunition, appointments and uniforms for the Regular Military, Naval or Volunteer Imperial or Colonial Forces of His Majesty.
82 Atlases, charts, globes and maps.
83 Bags for flour, grain, manure, produce, sugar, wool, coal and minerals not including paper bags; and bagging and sacking in the piece.
84 Band instruments and stands, the *bona fide* property of any Government belonging to the Union or of a Regular Military or Volunteer Corps, and not the property of individuals.
85 Bones, feathers, ivory, hair, hoofs, horns, shells, skins, teeth, wool and other parts of animals, birds, fishes or reptiles, not being manufactured, polished, or further prepared than dried and cleaned, but in their raw and unmanufactured state.
86 Book-binders' requisites, consisting of boards, cloth, leather, marble paper, skin, thread, tape, vellum, webbing and wire.
87 Books and music printed, including newspapers and periodicals not being foreign unauthorized prints of any British or South African copyright work.
88 Borax, bromine, litharge, manganese, di-oxide and quicksilver.
89 Bottles and jars of common glass or earthenware imported full of any article liable to a rated duty.
90 Boxes, empty, cardboard and wooden, put together or in pieces or shooks for packing; and staves.
91 Brass and copper, and composition metal: in bars, ingots, plates and sheets: plain, including perforated, but otherwise unmanufactured.
92 Bullion, coin, specie, bank notes and other paper currency.
93 Carriages, carts, wagons and other wheeled vehicles the manufacture of South Africa, imported into the Union overland.
94 Church decorations, altars, bells, fonts, lecterns, pulpits, organs, plate or vestments, and illuminated windows, imported by or for presentation to any religious body.
95 Coir, candlewick, cotton, flax, fibre, flock, hemp and jute: raw, waste or unmanufactured.
96 Collodion cotton, glycerine and nitrates for manufacturing purposes.
97 Cups, medals, and other trophies imported for presentation, or presented as prizes at examinations, exhibitions, shows, or other public competitions, for excellence in art, bravery, good conduct, humanity, industry, invention, manufactures, learning, science, skill, or sport, or for honorable or meritorious public services; provided that such articles shall on importation or delivery free from the Customs bear engraved or otherwise indelibly marked on them the name of the presenter or presentee and the occasion or purpose for which presented.
98 Consular uniforms and appointments and printed official consular stationery.
99 Cork dust, paper shavings, sawdust, husks and other waste substances intended and suitable for use only as packing material.
100 Diagrams, designs, drawings, models and plans.
101 Diamonds and other gems or precious stones in their rough state.
102 Dye-nuts, gambier, myrobalans, sumach, valonia and other dye stuffs for leather.
103 Engravings, lithographs and photographs, and enlargements or reproductions of the same.
104 Fire clay, terra alba and fire bricks.
105 Fish, fresh and fish ova; also dried, cured or salted fish and raw fish oil of South African taking.
106 Fruit: fresh or green, including cocoanuts.
107 Fruit and other produce;—driers or evaporators of.
108 Glue.
109 Guano and other substances, animal, mineral or vegetable, artificial or natural, suitable for use as fertilizers or manures.
110 Hair cloth and springs for furniture.
111 Ice.
112 Iron and steel: angle, bar, channel, hoop, rod, plate, sheet or T; plain, including perforated and galvanized; rough and unmanufactured, not including corrugated sheets.
113 Launches, tugs and lighters; provided that when condemned or landed to be broken up, duty shall be paid at the Customs on the hull and all fittings according to the tariff that may then be in force.
114 Lead: bar, pipe, sheet, foil and acetate of.
115 Leather: patent, enamelled, roan and morocco, and pigskin in the piece and valve hide.
116 Lifeboats, belts and buoys, and other life-saving apparatus imported by any recognized society.
117 Metal of all sorts in bars, blocks, ingots, and pigs for founding, not elsewhere described.
118 Paintings, pictures, picture books and etchings.
119 Paper ordinarily used for printing books, pamphlets, newspapers and posters, or for lithographic purposes.
120 Potash and soda, carbonate, bi-carbonate, caustic, crystals and silicate.
121 Printing and lithographic inks.
122 Printing, lithographing, paper-cutting, folding, numbering and perforating machines or presses, blocks, formes, fontes, plates, rollers, stones and type, and other apparatus suitable only for use in book-binding or printing industries.
123 Public stores, imported or taken out of bond by, and *bona-fide* for the sole and exclusive use of, the Government of His Britannic Majesty, and of any Government belonging to the Union, provided that a certificate be delivered to the Customs Authorities given under the hand of an Officer approved of by the Principal Officer of Customs, setting forth that any duty levied on such public stores would be borne directly by the Government: and provided further that no portions of such stores used or unused shall be sold or otherwise disposed of so as to come into the possession of or into consumption by any persons not legally entitled to import the same free of duty, without the consent of the Principal Officer of Customs and the payment of the duties to him by the Officer so selling or disposing of such public stores.
124 Rattans, cane and bamboo: unmanufactured.
125 Resin and carbonate of ammonia.
126 Saddle-trees.
127 School furniture and requisites: being all articles certified by the Superintendent-General of Education, or any official appointed for that purpose in any Colony or Territory in the Union, to be for use in any school.
128 Sculpture, including casts or models of sculpture.
129 Seeds, bulbs, plants and tubers for planting and sowing only, under such regulations as regards edible kinds as the Customs authorities may impose to safeguard the revenue against diversion into ordinary consumption.
130 Sheep-dip, sheep-dipping powders, materials suitable only for dip, and dipping tanks.
131 Specimens illustrative of natural history, and exhibits for public museums.
132 Sprayers and sprinklers and other apparatus for destroying pests or diseases in stock, plants or trees.
133 Sulphur and other substances for destroying pests or diseases in stock, plants or trees; and disinfectants.
134 Thread: Boot and shoemakers', saddlers' and sailmakers', and seaming twine.
135 Tin and Zinc: Bar, plate or sheet; plain or perforated, but otherwise unmanufactured.
136 Tobacco, the produce of South Africa, imported into the Union overland.
137 Vaccine virus, toxine and serum.
138 Vegetables: Fresh or green, but not including potatoes or onions.
139 Water-boring and pumping apparatus.
140 Wax, viz.: Paraffin and stearine and stearine grease ordinarily used in the manufacture of candles.
141 Wine presses and wine pumps.
142 Wood meal.
143 Wool, straw, hay and forage presses.

CLASS V—General ad valorem Rate, ten per cent.

144 All goods, wares, or merchandise not elsewhere charged with duty, and not enumerated in the Free List, and not prohibited to be imported into the Union, shall be charged with a duty of ten per cent. *ad valorem*.

Foreign Trade News

AGRICULTURAL IMPLEMENTS

Australia—The coming season in Australia promises to easily establish a record so far as importations of Canadian agricultural machinery is concerned. Last year importers were at their wits' end to supply the demand. Recent shipments received at Freemantle, Adelaide and Melbourne aggregate over 4,359 tons, but these form only a small proportion of the shipments due to arrive at these ports, while at the same time largely increased imports are looked for at other Australian centres. Everything points toward a splendid season for dealers in farming machinery, and the orders already received for forward delivery are of a most encouraging nature.—*Canadian Commercial Agent, Melbourne.*

Russia.—The excellent harvest of 1903 reacted, as was natural, on the sale of agricultural machinery, and a very large business was done in South Russia in this branch of industry.

German manufacturers, by copying British models, have become serious competitors in portable engines and threshing machines. Our German rivals, as is well known, are content to give longer credit, to accept less cash on delivery, and speaking generally, to do business on a basis which would be considered risky by our own firms. We are frequently reminded of the success of their pushing methods but we hear little of the dishonored bills and unpaid accounts in which such a system must often result.

Harvesting machinery is to a large extent in the hands of the International Harvester Company. No British manufacturer has succeeded up till now in producing binders both light enough and cheap enough for the Russian market. Canada, however, has one firm well represented, with an excellent machine well suited to the requirements of the country. Draft horses are here so small and weak that lightness is a more important selling quality than durability.—*British Consul-General, Odessa.*

CARRIAGES

Australia.—As a rule the Australian carriages are somewhat heavier and have wider tires than the Canadian, but they lack the superior finish of the latter. It is noticeable that locally built light road buggies have wider bodies and seats, and my attention was drawn to the serious objection of purchasers to the curtailed width of seats in Canadian rigs not built according to Australian specifications. There is, undoubtedly, an increasing demand for solid rubber-tired wheels, and Canadian makers should endeavor to cater to this trade.—*Canadian Commercial Agent, Melbourne.*

COTTON GOODS

China.—The large increase in the imports of grey shirtings, British drills, chintzes, etc., results in great measure from the higher cost of native fabrics, which has stimulated imports. The demand for handkerchiefs, socks, towels, crimp cloths, and similar cheap articles is increasing. Cotton flannel is displacing the Japanese article to some extent owing to lower cost. Indian yarn still advances because of its comparative cheapness.—*British Consul-General, Canton.*

DINING ROOM FURNITURE

Australia.—There is a large import business done in dining room tables, the bulk of the supplies being of United States manufacture. The demand is good, both for better class goods and for those made of imitation or stained woods. Dining room chairs to match tables are also required, especially in the better qualities. The Australian bent wood chairs, with cane seats, are now rather unpopular for dining rooms, the demand being for something superior. Frequent enquiries are received for illustrations and price lists of chairs and tables knocked down for export.—*Canadian Commercial Agent, Melbourne.*

HEATING APPARATUS

Australia.—A city architect is in correspondence with Canadian firms relative to securing heating apparatus for one of the largest office buildings in the city. This indicates an opening for an enterprising Canadian firm, and one to which I have more than once called attention. Outside of the city there is a greater need of economical heating, particularly of schools and other public buildings, than within the city. It would require some time and capital to ensure success, as much education would require to be done, but there can be small doubt that it could be made profitable.—*Canadian Commercial Agent, Sydney.*

MINING MACHINERY

Belgium.—The equipment of the mines in the Liège district, and generally over the whole of Belgium, is very backward, many modern implements for the saving of labor which are in general use in other countries being as yet unknown in the Belgian mines. There are, therefore, many openings for the supply of mining apparatus of all kinds. The vast Limbourg coal fields are shortly to be opened up, and will doubtless be installed with the most recent machinery for extraction, pumping and ventilation, and there will of necessity be a large demand for shaft sinking and other appliances.—*British Consul-General, Antwerp.*

MISCELLANEOUS

Mexico.—While imports from Canada into Mexico appear on paper to be insignificant at present, there is hope that as soon as the proposed steamship lines connect Mexican ports with those of the Dominion, the Canadian trade with Mexico will show itself in its true light, and I am of opinion that its volume will be a surprise. I may explain that Canadian manufacturers are well able to compete in this market against United States rivals in many commodities in which the manufacturer of the United Kingdom would not have any chance of success, especially in such articles as cheap furniture, wood pulp, plumbers' fittings, canned and preserved fish, breakfast foods and many groceries, which, so far as I am aware, have not yet much vogue in the United Kingdom, but which are much sought after on this side of the Atlantic.—*British Consul, Mexico.*

OFFICE DESKS

Australia.—The ordinary roll top desk has a large sale throughout Australia, especially in medium sizes and prices. The principal demand is for oak and quartered oak desks, while in a lesser degree, walnut and cherry woods find a sale. Some fine Canadian desks have been imported, but, as a rule, they are too heavy. While competition is keen, there is a large sale for medium priced goods, which should be well worth the attention of Canadian desk manufacturers who are anxious to increase their export business.—*Canadian Commercial Agent, Melbourne.*

SUGAR

Madeira.—All the cane turned into sugar (1903) was manufactured by the Hinton-Naudet process, being an improvement on the Naudet process, and the results were remarkable. During the 1903 season all the juice or saccharine matter was extracted from the cane with a loss of 36 per cent. of the total sugar contained in the cane, and this juice was obtained in nine-tenths of its original density. This process has made quite a sensation in the sugar world, and during the 1904 season, which is just over, planters from Trinidad, Demerara and Réunion came to Madeira to inspect it. I am informed that a large plant to treat 600 tons of cane per day is now being made in Glasgow for Trinidad. Should the advantages claimed for this process by the inventors be true—and I am told they have been demonstrated by practical experience—there is no doubt that it it will revolutionize all over the world the manufacture of sugar from cane.—*British Consul, Madeira.*

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

111 **Agencies**—**Berlin**—A correspondent in **Berlin, Germany**, offers his services as a manufacturers' agent and commission merchant. He visits the more important continental markets and sends a list of references.

112 **Brussels**—A correspondent in **Brussels, Belgium**, who is president of the Anglo-American Chamber of Commerce, is open to receive propositions from Canadian exporters regarding the agency for their goods.

113 **Melbourne**—A firm of importers and manufacturers' agents in **Melbourne, Australia**, who sell on commission to buyers from samples, and in some cases import on their own account, desire to make Canadian connections.

114 **Roustchouk**—A correspondent in **Roustchouk, Bulgaria**, wishes to communicate with manufacturers and exporters of different lines and asks for catalogues and prices. This correspondent visits regularly all the countries in the Orient.

115 **Apples**—A large firm of fruit and produce brokers have asked to be placed in touch with apple growers in Canada seeking to export fruit to the English market.

116 **Basswood**—A building firm in **Sydney, Cape Breton**, desires to purchase basswood.

117 **Binder Twine**—A commission agent in **Glasgow, Scotland**, established in 1885, desires correspondence with Canadian shippers of the above.

118 **Boats and Launches**—A correspondent in **British Columbia** desires to receive catalogues and quotations from Canadian builders of the above. The boats desired are for use on the Slocan Lake.

119 **Bookcases, Door Pulls, Opera Chairs, Office Desks, Office and House Furniture, Paper and Stationery**—A correspondent in **Montevideo, Uruguay**, desires particulars regarding different articles in the above lines of goods that are exported from Canada.

120 **Boots and Shoes**—Two enquiries have recently been received from **New York** commission houses for boots and shoes for the New Zealand market. They are asked for both in leather and rubber. Particulars will be forwarded on application.

121 **Butter**—A firm of butter importers, in **England**, who find there is an opening for Canadian produce in their locality, desire to be placed in communication with some of the best and largest butter producing dairies in Canada with a view to a regular consignment business during the season.

122 **Cameras and Photographic Supplies**—Catalogues and prices of the above are asked for by a correspondent in **Munros Bay, Mossel Bay, South Africa.**

123 **Candles, (Ceresine), Vaseline, Cable Wax and Cables**—The above lines are asked for by a correspondent in **Hamburg, Germany.**

124 **Castings (steel)**—A manufacturing firm in **Iberville, Que.**, ask for the names of manufacturers of Canadian steel castings.

125 **Cattle**—A new company with good references has opened business in **Genoa, Italy**, for the purpose of importing live cattle. They wish to procure these in Canada and offer good terms of payment. They also state that a large business may be worked up.

126 **Chairs, Camp Beds, Trunks and Travelling Bags, Feathers for Bedding**—A firm of wholesale and retail merchants established in **Brussels, Belgium**, in 1828, desire to procure from Canada the above articles.

127 **Cheese and Canned Fruit**—A firm of general commission agents and merchants in **Belfast, Ireland**, desires to purchase or sell on commission the above lines. They state that terms may be arranged on basis of draft against bill of lading. They send two references. Both articles are wanted in large quantities.

128 **Corn cobs**—A correspondent in **St. Kitts, B.W.I.**, desires to communicate with Canadian firms who have corn cobs to dispose of.

129 **Fish (Salt)**—A correspondent in **Havana, Cuba**, established for 18 years as an importer and now acting as an agent for some important United States firms, desires to procure the agency of a Canadian shipper of salt fish.

130 **Fruit and Fish**—A **London, England**, firm has asked to be placed in communication with first-class shippers in Canada of canned and evaporated fruit and canned fish.

131 **Handles (Broom and Shovel)**—A correspondent in **Belfast, Ireland**, desires to communicate with a manufacturer of the above for the purpose of doing a direct trade with Ireland, with wholesale buyers, or if preferred, would buy direct. References are forwarded.

132 **Hay and Oats**—A correspondent in **Kingston, Jamaica**, desires to purchase No. 1 Prime Timothy Hay in bales of 150 lbs. to 160 lbs., in car load lots of 10 to 15 tons, and Canadian oats running not less than 40 lbs. to bushel. This firm is well-known to the Association.

133 **Hollowware**—A correspondent in the **United States** desires to communicate with Canadian manufacturers of cast iron hollowware.

134 **Hops**—A firm of fruit merchants and grocers in **Manchester, England**, desires to correspond with Canadian shippers of hops.

135 **Knobs (Door)**—A correspondent in **Barwick, Nova Scotia**, desires to communicate with manufacturers of glass and porcelain door knobs.

136 **Lumber**—A house in **Buenos Ayres, Argentine Republic**, desires to procure supplies of lumber in Canada.

137 **Office Stationery and Office Systems, Sanitary Woodenware, Closet Seats**—A firm of wholesale and retail hardware merchants, established 1847 in **Hobart, Tasmania**, desires to communicate with shippers of the above. They ask for quotations f.o.b. New York or Liverpool. Payment will be made through a New York commission house.

138 **Panelling (Oak)**—Enquiry is made by a **London, England**, firm for names of good, reliable makers in Canada of oak panelling and similar goods.

139 **Panels (Basswood Key)**—Enquiry is made for basswood key panels for the manufacture of piano keys. Lots of not less than 3,000, delivered London, England.

140 **Sawmill Plant**—A band sawmilling plant for soft timber, capacity 20,000 ft. per day, with circular saws and accessories is required in **Glenorona, Wellington, N.Z.** Cash will be remitted with order.

141 **Staves**—An important brewing firm in **London, England**, desires to procure barrel staves.

142 **Sugar (Maple)**—A **San Francisco** firm dealing in confectionery supplies, desires quantities of maple sugar in 50 bucket lots. Discount all bills, and references are forwarded.

143 **Timber**—A **Glasgow** house are in the market for a quantity of timber in the log, suitable for bands and handles for cheap fruit baskets. They believe elm to be the most suitable for this purpose.

144 **Tin scrap (A)**—A **Toronto** correspondent is in a position to purchase tin scrap for export.

145 **(B)**—A **New York** correspondent desires to get in touch with manufacturers having tin scrap to dispose of.

146 **Veneer**—A **Leeds, England**, firm of timber merchants and wood turners ask for 3, 5 and 7 Ply wood.

147 **Vices**—Enquiry is received from **Birmingham, England**, for the names of manufacturers in Canada of what is known as "Eureka" vices.

148 **Wool**—A sample of wool has been received from a firm in **Roubaix, France.** This is a combed merino wool, and the correspondent states that the price asked at present is such that will attract parties using the same.

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For Family School or Churches

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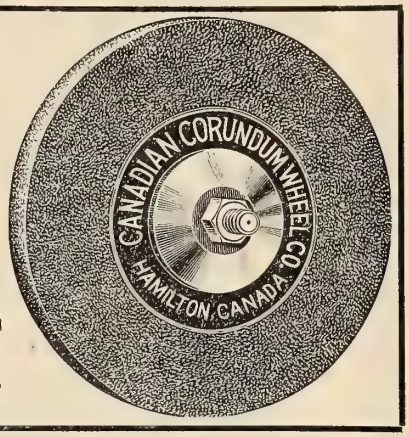
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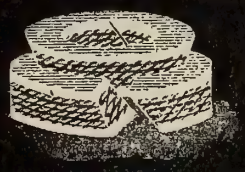
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We shall be glad to receive communications from Canadian manufacturers desirous of having their goods pushed on the Australian market. We have our own house in Perth, W.A. (Murray Street), and direct representatives, Robinson and Stewart, York Chambers, 56 Market Street, Sydney, and the Block, Collins Street, Melbourne. **Our representatives visit the principal towns in Australia, Tasmania and New Zealand several times during the year.**

Communicate with us direct or at any of the above addresses.

We have also a house in Shanghai, 21 Nanking Road.

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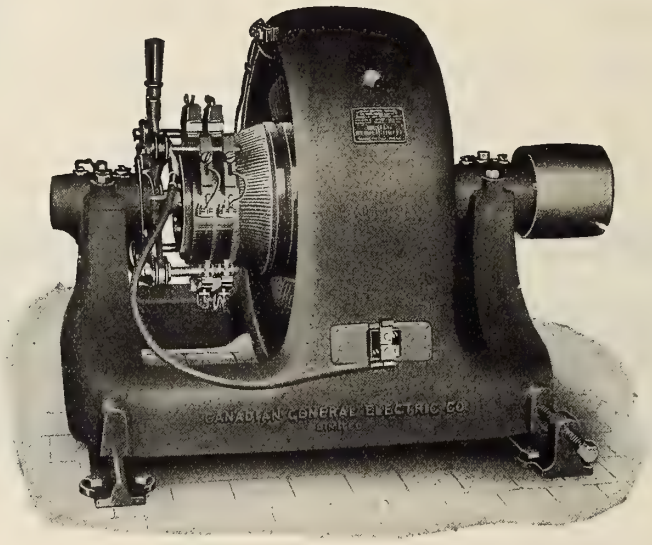
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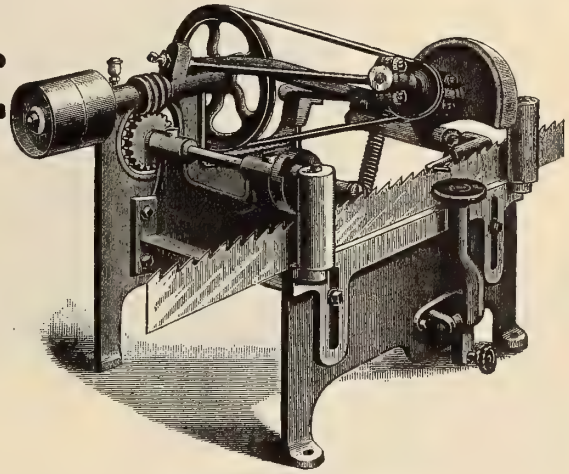
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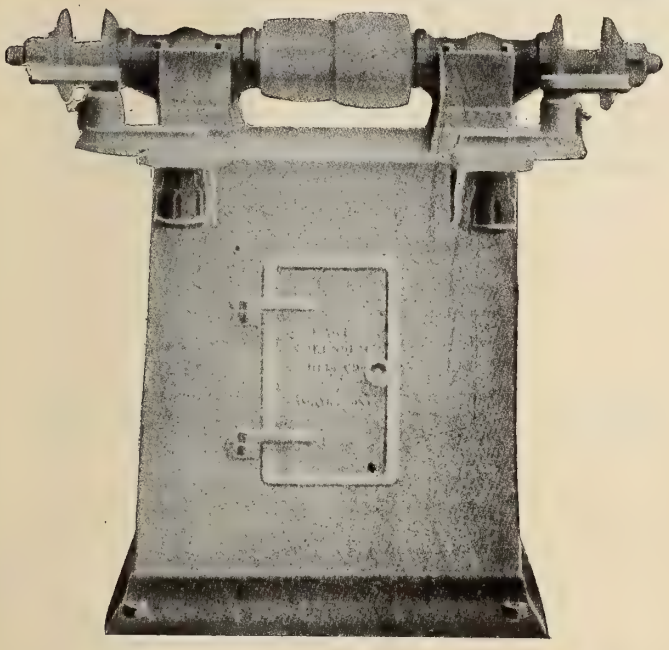
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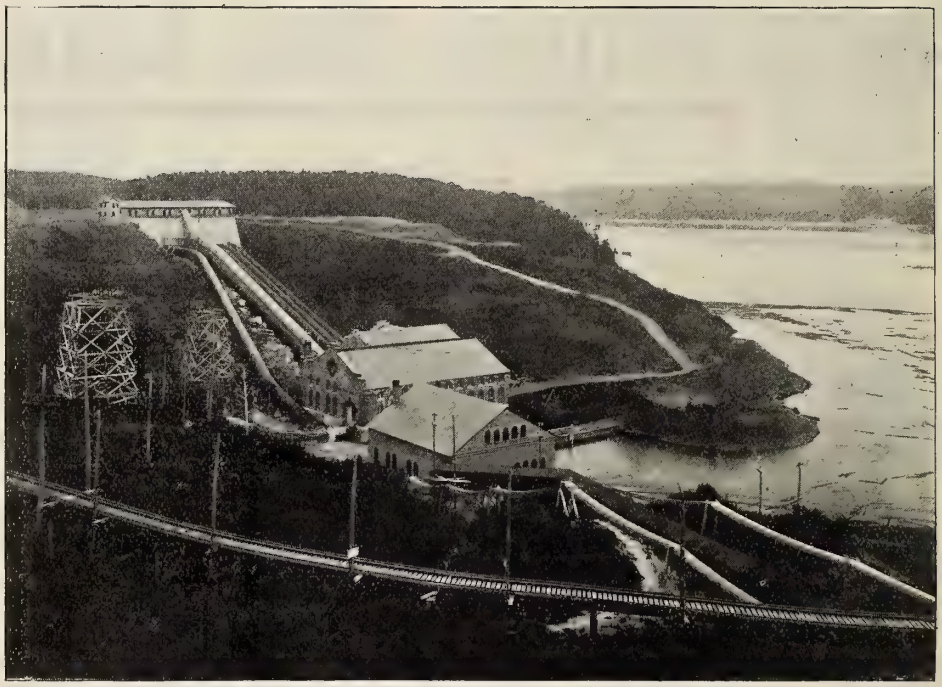
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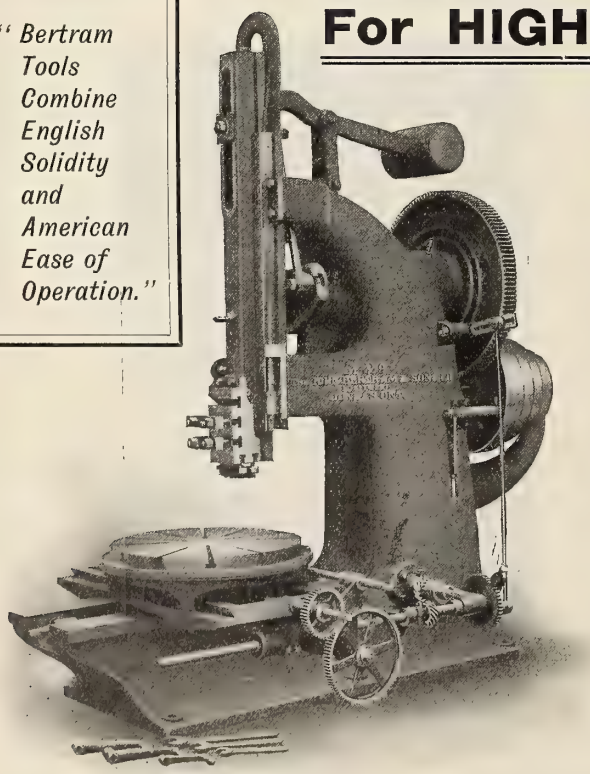
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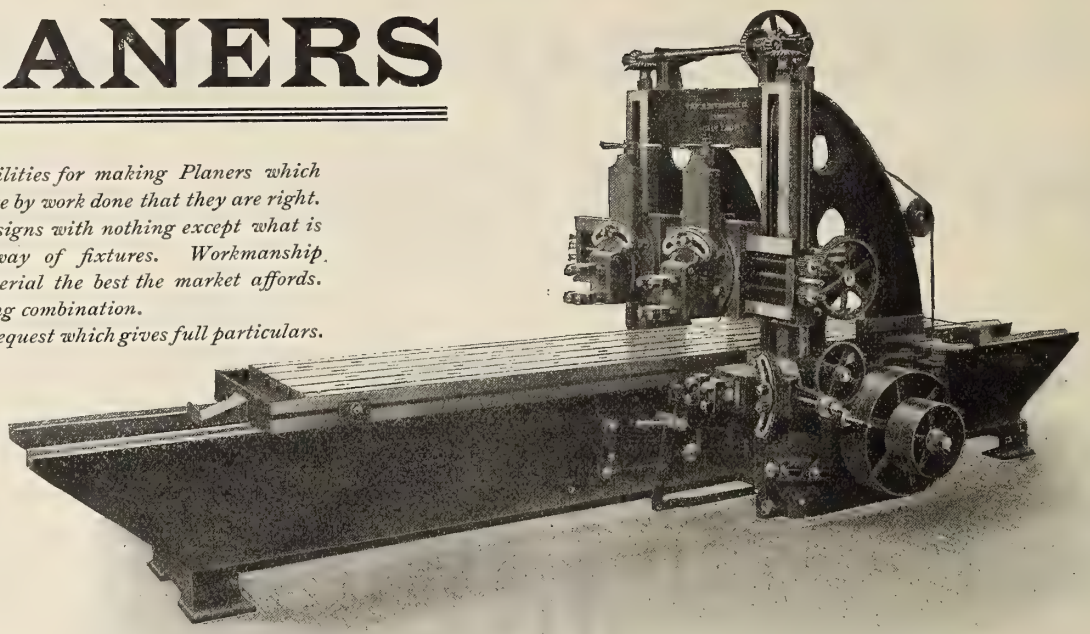
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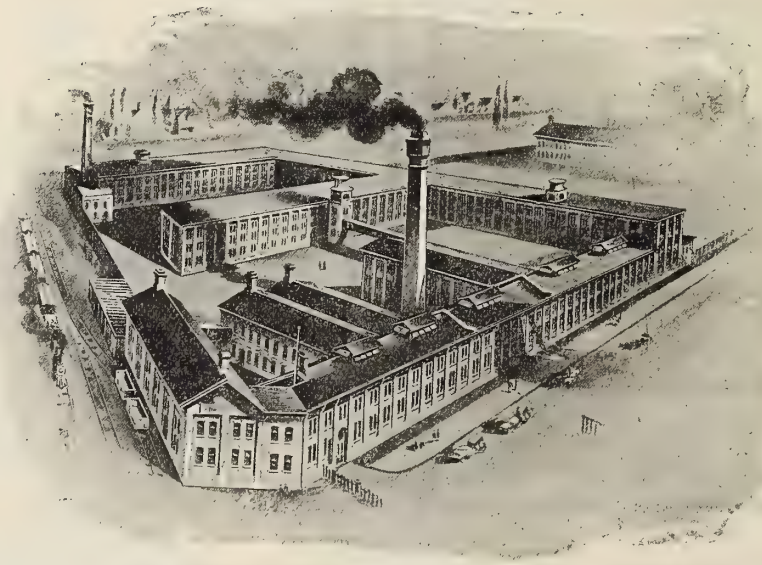
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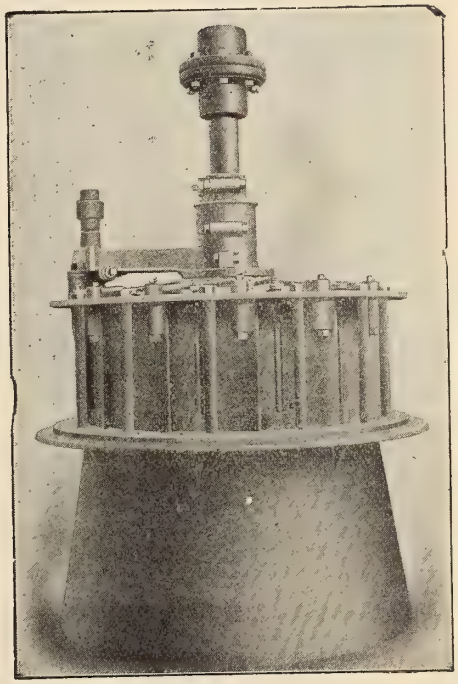
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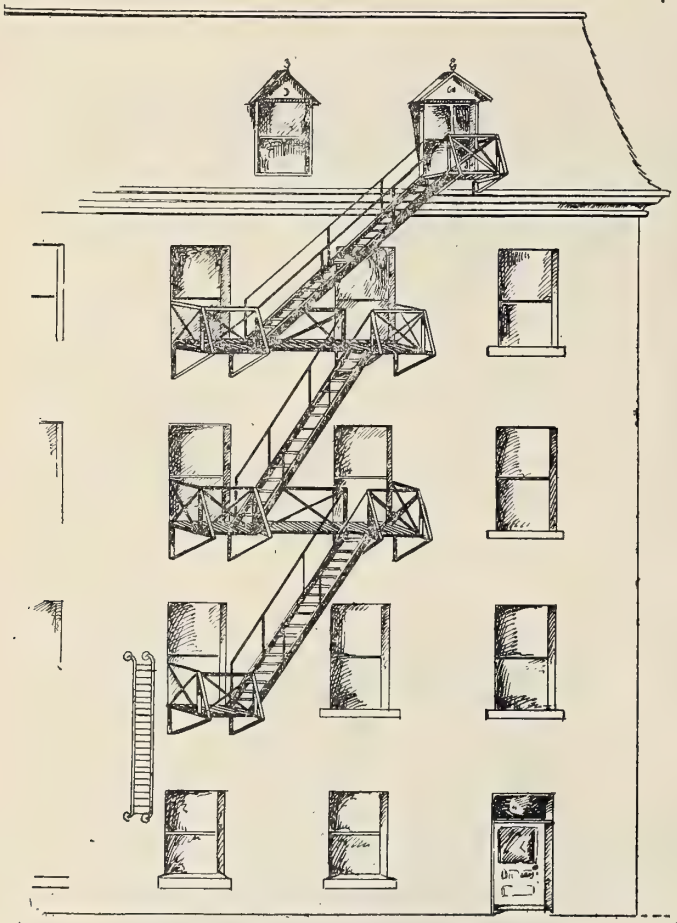
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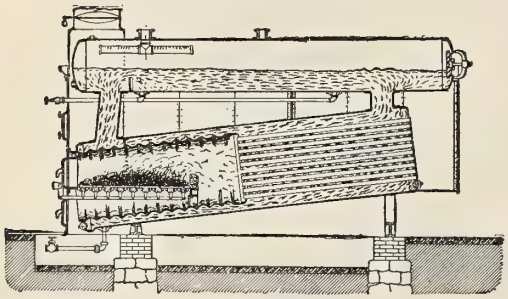
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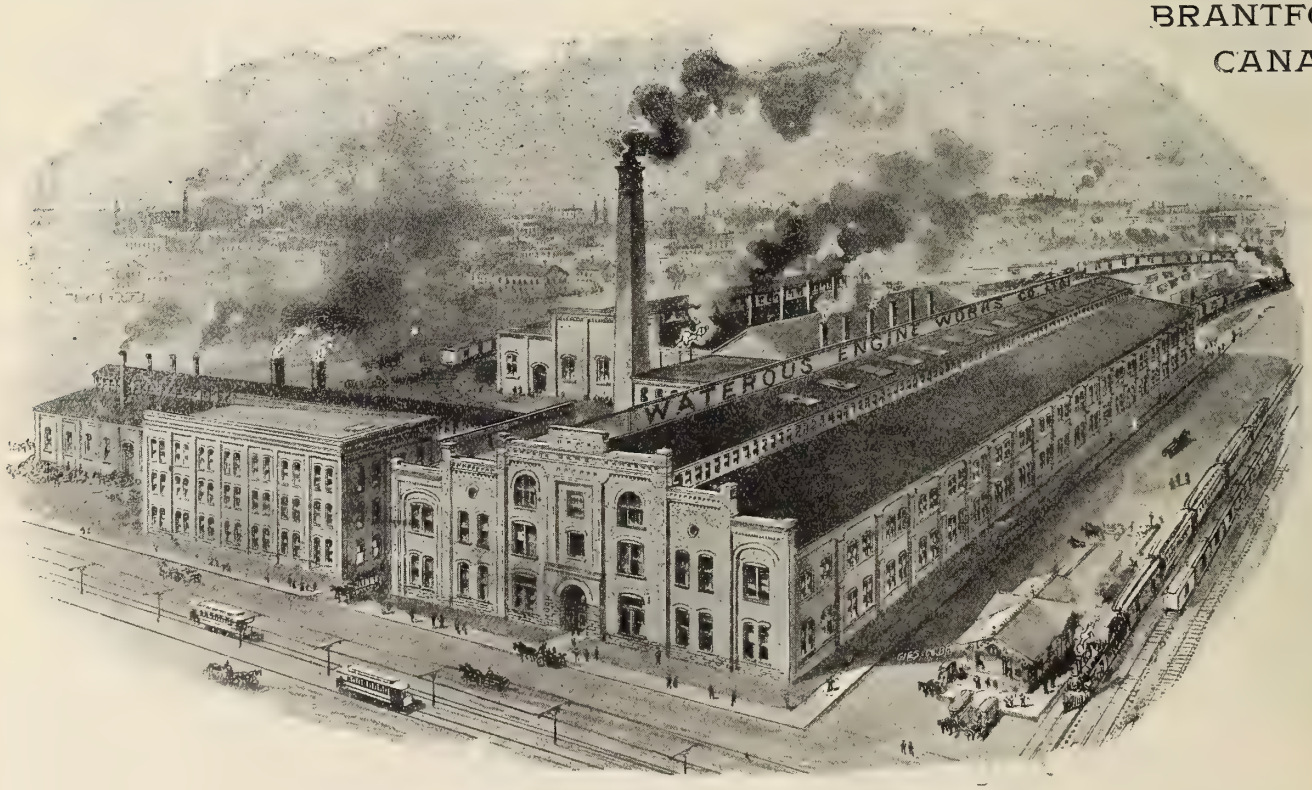
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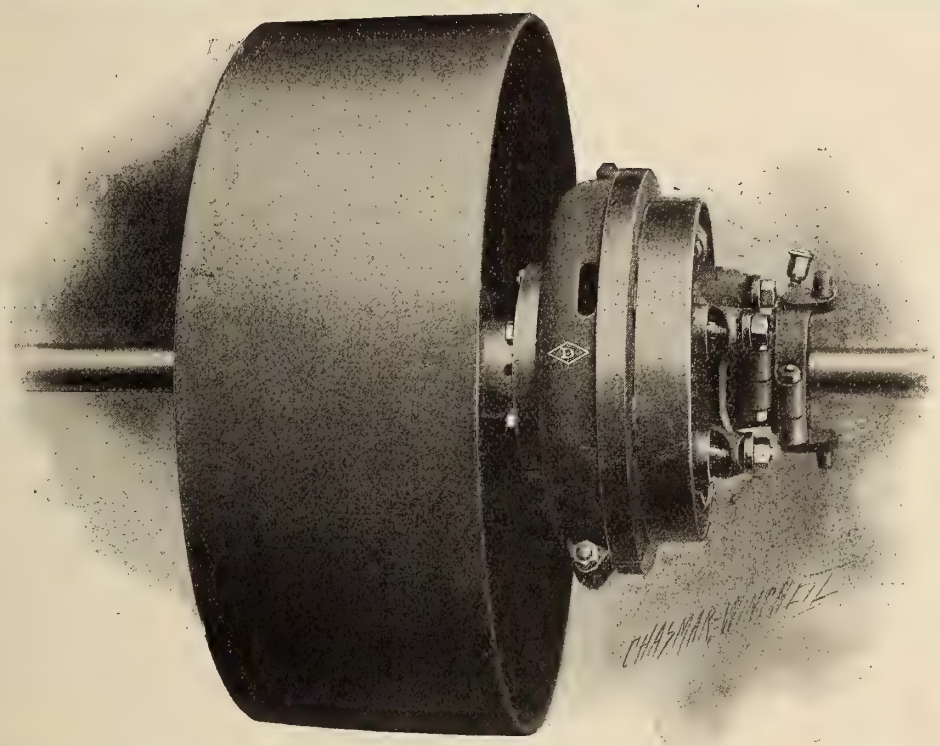
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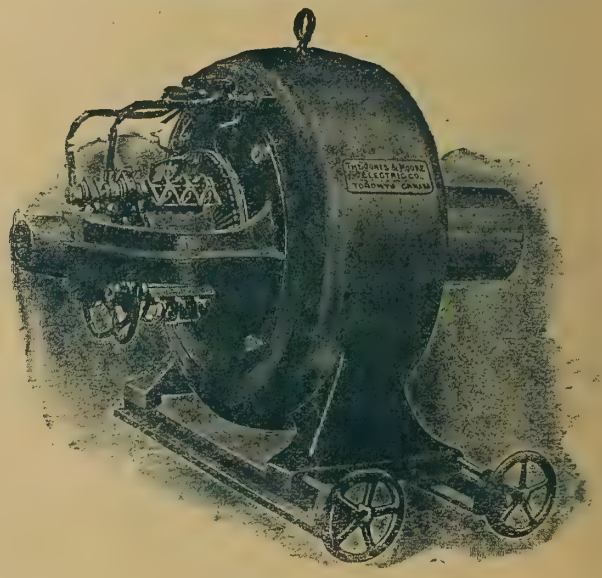
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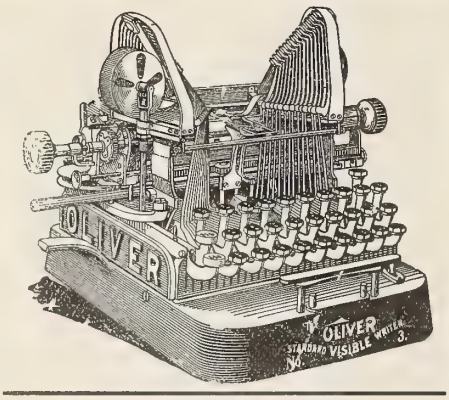
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Vol. V. TORONTO, DECEMBER, 1904. No. 5

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TWO GREAT ELECTIONS.

Two great elections were held during the month of November, one in Canada and the other in the United States. The result in Canada was a great Liberal triumph, while in the United States there was a still more sweeping victory for the Republicans. The sole important issue in the United States was the tariff. The Democrats had abandoned the advocacy of free silver and other fads, and the only radical difference between the two parties was that the Republicans favored the maintenance of a high protective tariff, and the Democrats proposed to lower it. Yet even the Democrats of the United States had no thought of making the tariff as low as the maximum tariff of Canada is to-day. The people of the United States declared most emphatically in favor of high tariff, giving Roosevelt the greatest majority ever secured by any Presidential candidate.

In Canada the issues were more complicated. The tariff question was kept in the background by both political parties. It is true that the leaders of both parties made tariff declarations, but the question kept most prominently before the people was that of the construction of the new transcontinental railway. In Nova Scotia, Quebec and Ontario, the Liberal candidates all stood for higher protection. Manufacturers were assured that the tariff revision proposed by the Laurier Government would give ample protection to their industries. There was never before an election in Canada in which the Liberals stood so close to the Conservatives on the tariff. But both political parties thought they had most to gain by making the railway question the paramount issue. There was a strong public feeling in favor of the immediate construction of a new transcontinental line from ocean to ocean that would broaden the habitable area of the Dominion. There was a general impression that the Liberal policy regarding the Eastern Section was more definitely defined than that of the Conservatives, and that consequently the immediate construction of a through line was more certain if the Liberals were successful. In the latter part of the campaign the Conservatives stated emphatically that they would construct a through line immediately, but it was too late to dispel the notion that they were opposed to the construction of the Eastern section. In the far West the Liberals argued that while the Conservatives were trying to agree on a policy regarding the Eastern section, the construction of the Western section would be tied up. Moreover, it was alleged that the Senate favored the Liberal rather than the Conservative policy, and that a Conservative victory would cause a deadlock between the two Houses of Parliament, which would result in an indefinite postponement of railway construction. It was even alleged that Sir Mackenzie Bowell was opposed to Mr. Borden's policy of Government ownership, and although he emphatically denied this, his denial, coming in the last days of the campaign, had not time to overtake the other story. In New Brunswick the Liberals gained a good deal of support on account of the general belief that the construction of the railway through that Province would put a great deal of money in circulation there. In Nova Scotia the Liberals argued that the construction of the Eastern section as proposed by the Liberals would make a demand for Cape Breton rails and rods, New Glasgow steel, Amherst cars, and many other things produced in Nova Scotia. Moreover, it was held that the new line would be so much shorter than the Intercolonial that it would practically bring Nova Scotia many miles nearer to Quebec, Ontario and the North-West. If the Conservatives had from the first declared that they would immediately construct the shortest possible line from ocean to ocean, the election would no doubt have been fought over the question of public ownership. As it was the Liberals said very little about public ownership, and made the most of the popular impression that the Conservatives were not unitedly in favor of the construction of the Eastern section, and that consequently the whole line would be delayed.

Taking these facts into consideration it cannot be said that the Canadian people endorsed a low tariff policy in the recent Dominion elections.

NOTICES.

Executive Council, Canadian Manufacturers' Association, regular monthly meeting, Board of Trade Building, Toronto, Thursday, December 15th, at 2 p.m.

Toronto Branch, regular monthly meeting, Board of Trade Building, Toronto, December 8th, at 2 p.m.

Montreal Branch, regular monthly meeting, Board of Trade Building, Montreal, December 8th, at 2.30 p.m.

Nova Scotia Branch, regular monthly meeting, Board of Trade Building, Halifax, December 8th, at 2 p.m.

Insurance Committee, Canadian Manufacturers' Association, first regular meeting, Board of Trade Building, Toronto, December 14th, at 2 p.m.

A Winnipeg correspondent of the Toronto News says that some of the Conservatives there are in favor of calling a party convention for the purpose of removing the higher protection plank from their platform and strengthening the public ownership plank. It is altogether unlikely that the Conservative party will do anything so foolish. Popular opinion in favor of adequate protection for all Canadian industries is steadily gaining ground. The Liberal party are moving rapidly toward higher protection, and it is improbable that the Conservatives will move back when the Liberals are going forward. It should be noted in this connection that Mr. Richardson, the Independent who ran against Mr. Sifton in Brandon, advocated the abolition of the duties on agricultural implements and a general lowering of the tariff. He was defeated by a very large majority, although he was one of the best-known men in Manitoba, had many friends among the Liberals, and was backed up by the Conservatives, who nominated no candidate. Mr. Richardson's battle cry was "Lower tariff and public ownership of railways." His defeat should not encourage either Liberal or Conservative candidates to advocate lower tariff.

THE PRIZE IS CANADA.

According to the Boston Herald the greatest game to be played in international politics in the near future is to be with a football called "reciprocity," and "as goes the battle so rises or sets the star of a great consolidated British Empire." "The indications are that the awakening of American statesmen has come," continues the Herald. "The contest draws on, and the great prize is Canada—nominally commercial Canada, but actually the political Dominion."

In other words, the Boston Herald believes that if the agitation for a reciprocity treaty between Canada and the United States is successful, the British Empire will go to pieces and Canada will fall as a rich prize to Uncle Sam.

Canada would, indeed, be a great prize, and the people of the United States are just beginning to realize the value of it. Fortunately, the statesmen of the United States are not the only ones who have awakened to the value of Canada. British statesmen are beginning to appreciate the possibilities of the Dominion, and best of all our own statesmen now know how to value this great heritage. Sir Wilfrid Laurier has well said that Canada is to be the country of the twentieth century. It is not conceivable that the Premier who holds such a high view of Canada's future will consent to any arrangement by which the Dominion will become the prize of the Republic. It is true that Sir Wilfrid Laurier once favored reciprocity with the United States, but he said several years ago in the Canadian House of Commons: "Canadians no longer desire reciprocity." Those were true words as regards the great majority of the Canadian people at that time, and they are even truer to-day than they were then. Even in the days when unrestricted reciprocity was the Liberal battle cry, and was believed in by the masses of Liberal voters, the majority of the Canadian people were so strongly opposed to it that the Liberals were never able to defeat the Conservatives in Dominion elections until they abandoned that policy. At the present time not one Liberal in ten believes in reciprocity with the United States. Sir Wilfrid Laurier well knows that popular sentiment among both Liberals and Conservatives is decidedly opposed to reciprocity. Sir Wilfrid's great successes in recent years have been due to the fact that many men who formerly voted with the Conservative party have voted with the Liberals. The adoption of reciprocity would drive these men out of the Liberal party, and many Liberals would go with them. The change of sentiment among Liberals is due to the fact that they now appreciate the possibilities of Canada as they never did before. They agree with their leader in thinking that Canada is to be the country of the twentieth century, and they have no desire to surrender it to the United States. They believe that Canadians should have all the advantages to be derived from the opening up of this grand country, and if the people of the adjoining Republic—the country of the nineteenth century—want to share the profits of the wonderful development which is about to take place, they must move across the border into the country of the twentieth century.

TO KILL IMPERIAL RECIPROCITY.

It is probable that the reciprocity agitation in the United States would be confined almost entirely to a few cities not far from the Canadian border, such as Boston, Buffalo, Detroit, St. Paul and Minneapolis, but for the fear that Mr. Chamberlain's proposals for mutual Imperial tariff preferences may be adopted. This fear has caused a rapid development of reciprocity sentiment in the United States. If the United States Congress agrees to reciprocity with Canada, it will be chiefly for the purpose of killing Imperial reciprocity. Once killed, that great Imperial project can never be revived, and the United States will then be in a position to withdraw any concessions it may have made to Canada for the purpose of defeating Mr. Chamberlain's plans.

THE RAILWAYS AND RECIPROCITY.

Queer things sometimes get into the stock market reports of the newspapers, but perhaps the most absurd statement that has yet appeared was one copied by a number of Canadian newspapers to the effect that a reciprocity treaty between Canada and the United States would cause a rise in Canadian Pacific Railway stock. To any thinking man it must be evident that a reciprocal arrangement with the United States that would cause trade to flow north and south instead of east and west must prove disastrous alike to the Canadian Pacific Railway, the Grand Trunk Pacific and the Canadian Northern railways. The greater the business between the eastern and western Provinces the better it will be for the Canadian transcontinental railways. On the other hand, any increase in business between Canada and the United States means extra traffic for United States' railways. A reciprocity treaty that would enable the big industrial centres of the United States to supply Canadians with manufactured goods and drive Canadian manufacturers out of business, would ruin the great Canadian railways. When the factories which supply the Canadian people with goods are in Canada, Canadian railways must carry the raw materials as well as the finished products. They must carry provisions, clothing and furniture to the workingmen. To take an extreme case to show the value of Canadian factories to the great railways, suppose that all the factories in Toronto, Hamilton and Ottawa, with the workmen employed in them, were suddenly transferred to the City of Buffalo, what an immense falling off there would be in Canadian railway business, although Buffalo is just on the other side of the border. Suppose that all the factories in all the cities, towns and villages of Canada were transferred to towns and cities of the United States, the railways of Canada would be obliged to discharge three-fourths of their employees, for every branch of their business would decline in an extraordinary way. Of course a reciprocity treaty would not close up every Canadian factory, but it would close up many of them, and every factory closed would be a direct loss to the railways. On the other hand, every new factory established in Canada, and every extension of an old one, increases the business of Canadian railways. The best thing that could happen for stockholders in the Canadian Pacific, Grand Trunk Pacific and Canadian Northern railways would be a general increase in the tariff, which would, to use the words of the Canadian Manufacturers' Association's tariff resolution, "effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries."

DRAWBRIDGE PROTECTION.

An old farmer being asked what he thought of the "dumping clause," said:—"It reminds me of the old drawbridge we used to have over the river near our market town many years ago. The farmers on their way to market were often put to great inconvenience while waiting for vessels to pass up and down the river, while on the other hand, the vessels sometimes had to wait for

the farmers' wagons to pass over. It was a great inconvenience to everybody, and one dark night, when the bridge was open, a young farmer drove into the river and was drowned with his horse. After that a permanent bridge was built high enough to let the boats pass under, while the farmers' wagons went overhead. The dumping clause seems to me to be drawbridge protection. It will be a source of annoyance to everyone and must sooner or later be replaced by specific duties high enough to afford adequate protection to all Canadian industries." Oh Rust!

NO CHANGE OF TONE REGARDING THE PREFERENTIAL TARIFF.

The *Sydney Record* says:—

"INDUSTRIAL CANADA, the organ of the Manufacturers' Association, in its current issue has somewhat changed its tone. Its leading editorial is an open declaration of hostility against the Liberal Government's policy of preferential treatment of British goods. In language which is instructive in the light it throws upon INDUSTRIAL CANADA'S previous professions in favor of a British preference, that publication now says, in declaring that the first thing to be done next session should be the revision of the tariff:

"'It is exceedingly important that in this revision of the tariff the lowest duties, viz., those levied upon goods of British manufacture, shall not be too low. Up to the present time it has been customary to refer to the duties imposed under the preferential clause of the tariff as the minimum duties. But Mr. Fielding's proposed minimum and maximum tariff is something quite apart from this. In explaining his proposal he said there would be a maximum tariff, a minimum tariff, and then below that a British preferential tariff. The business man who is asked how high the duties should be must bear in mind the fact that that the so-called minimum will not actually be the minimum tariff, for the British preferential cut must come below that again. The maximum tariff must necessarily be very much higher than any tariff Canada has yet had in order to allow of two cuts. If it is not, the protection will be altogether inadequate. In this revision the crucial point to Canadian manufacturers will be the duties levied upon goods of British manufacture, and unless our manufacturers can be adequately protected against those of the mother country, with its superior facilities, lower interest and lower wages, any arrangement will fail to accomplish real good to Canada.'"

INDUSTRIAL CANADA has not changed its tone, nor is it opposed to the principle of the preference. The article from INDUSTRIAL CANADA quoted by the *Sydney Record* is entirely in accord with the previous articles, and with the long established policy of the Canadian Manufacturers' Association. At the annual meeting of the Association in September, 1903, the following resolution was carried:—

"(1) That we reaffirm the tariff resolution passed at the last annual meeting in Halifax, as follows:—

'Resolved, That in the opinion of this Association, the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries.

'That, in any such revision the interests of all sections of the community, whether of agriculture, mining, fishing, or manufacturing, should be fully considered, with a view not only to the preservation, but to the further development of all these great natural industries.

'That, while such a tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection to all Canadian producers.'"

The attitude of the Canadian Manufacturers' Association in this regard is well known to Mr. Chamberlain and his associates, and is regarded by them as reasonable. At the annual meeting in Montreal in September, 1904, the above resolution was again reaffirmed, and Sir Howard Vincent, who was present at the banquet which followed, expressed strong approval of it. Mr. F. Hastings Medhurst, one of the Chamberlain candidates for the British Parliament, also strongly endorsed the resolution declaring that Mr. Chamberlain had no desire to sacrifice Canadian industries. He pointed out that the most highly protected countries imported large quantities of goods and that all Mr. Chamberlain desired was that each country of the Empire should purchase from other countries of the Empire as far as possible the commodities that must necessarily be imported. "This is the policy of Mr. Chamberlain," he said, "not to do anything that can hinder the development either of the colonies or of the Mother Country, but to do what we can so that the deficiencies of the various parts of the Empire may be met by the other portions of it."

In spite of the high tariff of the United States, that country imports over one thousand million dollars' worth of goods annually, and INDUSTRIAL CANADA has repeatedly pointed out that if the United States Congress, while maintaining their high tariff against other countries, would lower the tariff on British goods to nearly the same level as the present general tariff of Canada, the arrangement would be regarded with enthusiasm by the British people. Why then should not a similar offer from Canada be favorably received?

The Canadian Government now proposes a triple tariff—one scale of duties for high tariff foreign countries like the United States, a lower scale for low tariff foreign countries, and a third still lower for countries of the British Empire.

The Canadian Manufacturers' Association holds that the lowest scale of duties, that applied to British goods, should be sufficiently high to give adequate protection to Canadian industries, taking into consideration the higher wages and higher rates of interest that must be paid in this country as compared with the United Kingdom. But the Association does not favor any reduction in the percentage of preference. The British preferential tariff, while affording adequate protection against unequal British competition, should be thirty-three and a third per cent. lower than the minimum tariff on foreign products. Under such an arrangement the minimum tariff against low tariff foreign countries would probably average somewhat higher than the present general tariff, while the maximum tariff against foreign countries would approximate closely to that of the United States, taking Canadian conditions into consideration in every case. This was probably what Mr. Fielding intended when he proposed a triple tariff.

A CANADIAN TIN PLATE INDUSTRY.

It is reported that a factory for the manufacture of tin plate and pressed steel is likely to be established at Morrisburg, Ontario. The projectors state, according to the newspaper reports, that they will employ 150 hands at the start, and that later on they will employ one thousand men. Such an industry would be of great value to the country, and it is to be hoped that the Government will see the necessity of giving adequate protection to it. At present tin plates are on the free list. A duty of one cent per pound proved insufficient protection to establish a tin plate industry in the United States. It was not until the duty was increased to 2.2 cents per pound in 1891 that the manufacture of tin plates was successfully established there. INDUSTRIAL CANADA has already published the statistics showing the wonderful progress of the United States tin plate industry under high protection, but the figures are such a remarkable demonstration of the success of high protection that we would again call the attention of the Government to them. The high duty went into force July 1st, 1891. The following table shows the imports, as well as the home production from 1890 to 1899, inclusive.

Year.	Imports. Gross tons.	Home Production. Gross tons.
1890	329,435	None.
1891	327,882	999
1892	268,472	18,803
1893	253,155	55,182
1894	215,068	74,260
1895	219,545	113,666
1896	119,171	160,362
1897	83,851	256,598
1898	66,775	326,915
1899	58,915	397,767

The price of tin plates to consumers of the United States was no greater immediately after the high duties were imposed than before, and as the industry developed in the United States, the prices were reduced.

Executive Council

NOVEMBER MEETING

Gratifying Increase in the Association's Membership—A Banquet for the London Members, and Regular Luncheons for Hamilton and Toronto—Foreign Correspondents to be Appointed—Increased Activity Among the Branches.

The regular monthly meeting of the Executive Council was held in the Council Chamber, Board of Trade Building, Toronto, on Thursday, November 24th, 1904, at 2 p.m., with the President, Mr. W. K. George, in the Chair.

The following other members were present:—Messrs. John Bertram, Dundas; Geo. Booth, Toronto; P. H. Burton, Toronto; C. N. Candee, Toronto; H. Cockshutt, Brantford; J. W. Cowan, Toronto; Robt. Crean; John Dick, Toronto; Richard A. Donald; L. V. Dusseau, Toronto; P. W. Ellis, Toronto; S. W. Ewing, Montreal; Jas. Goldie, Guelph; W. P. Gundy, Toronto; Lloyd Harris, Brantford; Ernest G. Henderson, Windsor; J. Hewton, Kingston; M. Kennedy, Owen Sound; W. R. Landon, Chatham; D. T. McIntosh, Toronto; John S. McKinnon, Toronto; W. K. McNaught, Toronto; Robt. Munro, Montreal; J. A. Publow, Hamilton; Thos. Roden, Toronto; A. S. Rogers, Toronto; J. T. Sheridan, Toronto; T. A. Staunton, Toronto; A. W. Thomas, Toronto; J. O. Thorn, Toronto; W. B. Tindall, Toronto; R. L. Torrance, Guelph; C. Turnbull, Galt.

In opening the meeting the President welcomed a number of new faces around the board, and expressed the hope that these gentlemen would attend the meetings regularly.

The minutes of the previous meeting as published in the preceding issue of INDUSTRIAL CANADA, were approved.

Communications were received as follows:—

(a) From the following members of the Council unable to be present:—C. C. Ballantyne, Montreal; Geo. E. Drummond, Montreal; Geo. E. Amyot, Quebec; J. J. McGill, Montreal; R. C. Wilkins, Montreal; J. T. R. Laurendeau, Montreal; J. P. Murray, Toronto; Henry Wright, Toronto; C. Bermingham, Kingston; C. R. H. Warnock, Galt; C. H. Waterous, Brantford; Geo. D. Forbes, Hespeler.

(b) A letter of appreciation from Mr. Wm. Shearer, the Secretary of the Brockville Made-in-Canada Exhibition, expressing thanks for the assistance of the Association in making the exhibition a success.

(c) From the Secretary of the Citizens' Industrial Association of America, inviting the assistance of representatives at the second annual convention of the Association, to be held in New York on the 29th and 30th inst. On motion of Mr. Donald, seconded by Mr. Thorn, Mr. F. B. Polson, Chairman of the Parliamentary Committee, and the Secretary, were appointed to represent the Association.

The reports of officers and committees as follows were then received and regularly adopted:—

Secretary.

The Secretary reported favorable progress in all branches of the Association work.

Treasurer.

The report of the Treasurer was presented by Mr. Geo. Booth. It included a financial statement of the Association's revenue and expenditure up till November 1st.

Finance Committee.

The report of the Finance Committee was presented by Mr. J. O. Thorn. It recommended the payment of the regular monthly expenditure, and brought to the attention of the Executive Council the fact that new and larger offices would be required in the near future.

The committee had considered carefully the question of the Branch Secretaries' salaries, and, in view of the recommendation adopted at the last meeting of the Executive Council that a general advertising solicitor should be appointed to cover the whole field of the Association, they decided to eliminate all commissions from advertising as a factor in the salaries of the Branch Secretaries. It was recommended that in the Montreal Branch the Secretary should be remunerated at a stated salary, and that in the other branches, viz., Nova Scotia, Quebec, Manitoba and British Columbia, the remuneration of the Secretaries should consist of a percentage of the revenue accruing from the membership fees with an additional amount for every monthly meeting of the branch or its Executive attended by a quorum of five members. This new basis was recommended, subject to the approval of the Montreal Branch regarding the Montreal arrangement.

Reception and Membership.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. Robt. Crean. It recommended for acceptance fifty-one applications for membership, the names of which appear in another column.

The Committee also reported preliminary arrangements for a banquet to be held in London in the week between Christmas and the New Year. Messrs. S. Munro, T. H. Smallman, Lt.-Col. Gartshore and A. W. White were appointed a local committee to take charge of the details.

Arrangements were also outlined for a series of regular luncheons for the Hamilton members.

The Secretary submitted a detailed report of his interview with the Dominion Atlantic Railway Co. It was agreed that an offer for settlement of the claim held by the Company should be made without prejudice. The report of the committee made it quite clear that all expenses incurred in arranging excursions or other enterprises for the members should not be defrayed from the general funds of the Association.

The report also stated that investigation was being made with regard to the proposed excursion to Great Britain, and that the members would be notified as soon as definite information was secured.

Industrial Canada.

The report of the INDUSTRIAL CANADA Committee was presented by the Chairman, Mr. A. W. Thomas. It reported the regular monthly meeting, at which the tenders for the supplies and printing for the current year had been awarded; the former to the Toronto Paper Mfg. Co., and the latter to R. G. McLean. The Committee also recommended an advance of about 20% in the advertising rates, on account of increasing circulation, increased cost of publication, and other causes.

Special articles for approaching issues had been arranged for dealing respectively with smoke consumers, technical education, and a series of contributions on cost accounting, to be prepared by leading men in various branches of industry.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by Mr. P. W. Ellis, the Chairman, Mr. F. B. Polson being unavoidably absent. This report is published in full in this issue.

A short discussion followed upon the recommendation with regard to Government control of the Canadian telegraph and telephone service, but the report was finally adopted as read.

Commercial Intelligence.

The report of the Commercial Intelligence Committee was presented by the Chairman, Mr. A. S. Rogers. It is also published in another column.

Railway and Transportation.

The report of the Railway and Transportation Committee, which is also published in another column, was presented through the Chairman by Mr. W. H. D. Miller, the Manager of Transportation. The reading of the report was followed up by an interesting discussion upon the question of demurrage. The report was unanimously adopted as read.

Fire Insurance.

The report of the special Committee on Insurance was presented by the Assistant Secretary. It named the representatives already nominated from the various branches, and suggested December 14th as the date for the first meeting. Upon motion of Mr. Cockshutt, seconded by Mr. McKinnon, it was agreed that the Committee should elect its own Chairman and Vice-Chairman.

Branches.

The reports of the Montreal and Toronto Branches were presented by Mr. Robt. Munro and Mr. Richard A. Donald respectively. Both of these reports appear in this issue.

The Secretary reported an enthusiastic meeting of the Nova Scotia Branch, which is also referred to in this issue. He also reported a meeting of the Quebec Branch in that city on the 28th ult.

Mr. Roden asked whether the Association intended reaching any immediate decision with regard to its next Annual Meeting. The President replied that this matter would be brought before the Executive Council in the form of a recommendation from the Reception and Membership Committee in the near future.

Mr. John Bertram called the attention of the Association to the direct working out of the new dumping regulations, and a general discussion followed.

Upon motion of Mr. Donald, seconded by Mr. Rogers, the meeting adjourned.

PARLIAMENTARY COMMITTEE.

Mr. F. B. Polson, Chairman of the Parliamentary Committee, presided at the meeting held November 16th, 1904.

The following important matters were reported to the Executive Council:—

Ontario Division Court Service.

A member of the Association wrote complaining that the present practice of the Division Courts, both with regard to the service of the clerks and the enforcing of judgments, met with the dissatisfaction of manufacturers who sold their goods directly to retailers. It was suggested that further information should be secured before the Committee should take any action.

Discrimination by Canadian Wholesale Houses.

It was reported to the Committee that certain wholesale dealers' associations were discriminating against the products of certain Canadian manufacturing firms in an endeavor to enforce their own terms of sale. The Secretary reported that this matter was being considered by the Manufacturing Grocers' Section of the Association, and it was, therefore, held over for further report.

The Canadian Society of Stationary Engineers sought the support of this Association for a bill to be introduced in their behalf into the Ontario Legislature. By unanimous consent this letter was filed.

A communication was received from the Jewish Emigration Board in London, England, asking the approval of the Association for their work in supplying mechanics for Canadian manufacturers. It was unanimously agreed that this communication should be filed.

The attention of the Committee had been given to business arising from the Annual Meeting of the Association, as follows:—

Government Control of Telephone Service.

After discussion it was moved by Mr. Thorn, seconded by Mr. Booth, that a letter should be sent to the various branches of the Association stating that the members of this Committee, speaking generally, approved of the principle of Government ownership for both telephone and telegraph services, and asking the various branches of the Association for the opinion of their Executive. This was adopted.

Extra Provincial Corporation Tax.

After discussion is was agreed that, carrying out the recommendation embodied in the last annual report of this Committee, some general movement should be made towards having these taxes abolished; and that the branches of the Association should be asked to press for Provincial legislation which will abolish extra Provincial taxes against companies operating under a Dominion Charter, or in other Provinces which adopt similar exemptive legislation.

Franchise Rights for Incorporated Companies in Ontario.

The Secretary was directed to ascertain what Provinces in Canada at present extend franchise rights to such companies, and to secure, if possible, copies of the Acts.

Technical Education.

The resolution passed at the Annual Meeting, recommending the appointment of a special committee to consider this question had been referred to the Parliamentary Committee. Believing, however, that this question belonged rather to the province of the Commercial Intelligence Committee, it was moved by Mr. Thorn, seconded by Mr. Tindall, that the matter should be referred to that Committee.

It was suggested by Mr. Murray that a special file should be opened in the office for recording legal decisions in labor matters. This was unanimously agreed upon.

COMMERCIAL INTELLIGENCE COMMITTEE.

The regular monthly meeting of the Commercial Intelligence Committee was held on November 14th. The Chairman, Mr. A. S. Rogers, presided.

A number of communications were put before the Committee, as follows:—

1. From the Deputy Postmaster-General, stating that the question of parcel post between Canada and Trinidad, and Canada and Barbadoes, was receiving the attention of the Department.

2. From Mr. J. P. Murray, regarding the forwarding of unstamped letters to the dead letter office, and suggesting that some change should be made whereby delivery would not be delayed. The Committee are looking into the system at present in use.

3. From the Canadian Commercial Agent in Australia respecting the duty on catalogues.

Correspondent Members.

4. Eight replies were received from as many foreign centres, accepting the proposition made by the Association regarding the appointment of correspondent members. In most cases the correspondents agree to act for a small fee for each report furnished. A number of them have accepted the reciprocal basis proposed. Your Committee is much encouraged in the endeavor they are making to re-organize the correspondent system by the results secured up to the present time. With the exception of the application of Mr. J. H. Watlington, of Bermuda, all of the correspondence in connection with this matter was held over until further enquiries should be made and additional replies received. The Committee decided to recommend the appointment of Mr. Watlington for the Island of Bermuda.

London Office.

5. The Secretary reported that a letter had been received from the Prime Minister, stating that owing to the dissolution of Parliament, it would be impossible at present for the Government to reach any decision regarding the establishment of a Canadian Building in London.

Your Committee is considering the feasibility of publishing each month in INDUSTRIAL CANADA a short synopsis of the monthly trade and navigation reports, showing the value, in a general way, of the manufactured goods imported into Canada.

RAILWAY AND TRANSPORTATION.

The Railway and Transportation Committee presented a comprehensive report dealing with various matters under the consideration of the Committee, including, among others:—

The question of demurrage, to which the Committee has given some attention, and upon which there is in course of preparation a careful examination of the matter, that the Association's case before the Railway Commission may be conclusive. (See Transportation Department of this issue for circular issued by the department to members on this subject.)

Decisions of the Railway Commission.

The Railway Commission have given a temporary approval to the shipping forms of the railway companies, and have notified parties interested to be prepared to discuss these forms when the date is fixed for their final consideration.

The decision of the Board of Railway Commissioners in the British Columbia Lumber Case, which has been challenged by the Canadian Pacific Railway, was fully discussed.

Reference was made to the decision in the case of the Tower Canadian Oiled Clothing Company favorable to the representations of the Association.

Complaint has been filed with the Board on account of Telfer Brothers, of Collingwood, with reference to a discrimination against Collingwood in rates to Canadian Pacific territory west of North Bay.

The Committee also discussed the advisability of changing the route of the Canadian-Australian Line to include a New Zealand port in place of Brisbane, Australia.

Report was made of a successful trip of the Manager of Transportation into the Maritime Provinces.

Mr. D. L. McGibbon, of Montreal, has consented to act upon the Committee, and by unanimous vote of the Committee his name has been added to its membership.

MONTREAL BRANCH.

The regular monthly Executive meeting of the Montreal Branch was held on November 10th, the Montreal Chairman, Mr. J. J. McGill, presiding. There were also present:—W. T. Whitehead, Clarence F. Smith, C. B. Gordon, D. Lorne McGibbon, J. S. N. Dougall, S. W. Ewing, G. W. Sadler, D Williamson.

The Tax on Motors.

The Chairman reported that a deputation consisting of himself, the Vice-Chairman and about fifteen members of the Association, had waited upon the Sub-Committee on Legislation of the City Council, and had presented the objections of the manufacturers to the licenses imposed upon the users of gas, gasoline, and electric motors, and upon all places considered dangerous from fire on account of the use of oil, varnish, gasoline, or such materials in the process of manufacture. They had enlisted the support of Ald. Ames, who would introduce a motion to abolish the tax on motors, and another to amend the clause in regard to places considered dangerous from fire.

A communication was received from the Jenckes Machine Co., of Sherbrooke, drawing the attention of the Executive to a law which prevented the employment of labor between one and six o'clock on the afternoon of polling day. Inasmuch as this law is not enforced, it was decided to take no action towards its repeal.

Delivery of Express.

Correspondence was read from the American Express Company in regard to the slow delivery of express parcels through the Customs. A Committee was appointed, who subsequently waited upon the Collector of Customs and Mr. J. S. Patch, Manager of the American Express Company, and pointed out that several changes in the method of procedure were desirable. An improved service is looked for.

In response to a communication from the Secretary of the Insurance Committee, requesting the appointment of four representatives from Montreal upon the Fire Insurance Committee, the following gentlemen were selected:—C. B. Gordon, Lt.-Col. J. H. Burland, C. C. Ballantyne and W. A. Gandle.

The following resolution was unanimously passed:—

RESOLVED,—That in the opinion of the Executive Committee of the Montreal Branch of the Canadian Manufacturers' Association, it is advisable that the express companies should be placed within the jurisdiction of the Railway Commission.

Seven applications for membership were received and passed.

TORONTO BRANCH.

The regular monthly meeting of the Toronto Branch was held on November 10th, 1904. There were present Messrs. R. A. Donald (Chairman), P. H. Burton, J. W. Cowan, R. Crean, P. W. Ellis, John Firstbrook, Ed. J. Freyseng, Geo. C. Gale, S. R. Hart, J. S. McKinnon, J. P. Murray, A. S. Rogers, W B. Tindall, R. J. Younge. Different matters were considered as follows:—

Local Fire Protection.

The Committee appointed by the Branch to confer with the Board of Control, Fire and Light Committee, Board of Trade and Toronto Board of Fire Underwriters, re improved fire protection for the city, reported that two satisfactory conferences had been held and that the Fire Underwriters had agreed to a plan for improved fire protection which would result in a reduction of 50c on insurance premiums. It also reported that further conferences would likely be held.

Civic Improvement.

In compliance with the request received from the Employers' Association, the Branch appointed Messrs. Thos. Roden, S. M. Wickett and R. S. Gourlay as a Committee to represent them at a conference of representatives from the Employers' Association, Board of Trade, Retail Merchants' Association, Bankers' Association and the Toronto Branch, to consider ways and means for improving civic conditions.

Membership.

The Membership Committee reported that they had met and had asked different members of the Branch to look after certain non-members in the city. They also submitted nine applications which were approved of.

Weekly Luncheons.

The Chairman outlined a plan for holding a weekly luncheon for the members of the Toronto Branch. For this purpose the Branch was divided into five different sections:—Dry Goods; Groceries, Drugs and Chemicals; Leather and Paper and Manufactures thereof; Wood and Manufactures thereof; and Metals and Jewelry. An Executive Committee was appointed for each section. Each Executive Committee is to have full charge of its section meetings, and one section will meet each week. At a meeting of the Chairmen of the Sections, Wednesday was fixed as the regular meeting day.

Fire Insurance Committee.

At the request of the Executive Council, the Branch elected ten representatives to the Fire Insurance Committee of the Association. The names of these representatives are given in the report of the Fire Insurance Committee.

NOVA SCOTIA BRANCH.

Since the last report of the Nova Scotia Branch was published three meetings have been held. The minutes of these, briefly, are as follows:—

October Executive Meeting.

At this meeting arrangements for the Dominion Exhibition were under discussion, and a Committee consisting of Mr. Alexander McNeil, A. C. Pelton and the Secretary, was appointed to co-operate with like Committees from the Board of Trade, the City Council, and the Exhibition Commission, to perfect arrangements for the Exhibition, provided the Government grant was obtained.

It was decided to recommend to the Branch that a resolution be passed asking the government to bring the express companies under the jurisdiction of the Railway Commission, and it was left with the Secretary to obtain similar resolutions from the

Boards of Trade, and from the Live Stock and Fruit Growers' Associations of the Province.

The November meeting of the Executive was held immediately preceding the meeting of the Branch, and preparatory to the same.

Meeting of the Branch.

The President, Mr. Alfred Dickie, addressed the meeting and pointed out the value of the Association to the manufacturers of Canada and of the Maritime Provinces, and urged the co-operation of all the members in order to secure the best possible results from the work.

Mr. Alfred Dickie was appointed a member of the general Executive in the place of Mr. John F. Stairs, deceased. Mr. T. M. Cutler was appointed a member of the Insurance Committee.

The Secretary was instructed to write the Head Office calling attention to the resolution of the Branch passed some time ago re Dominion Exhibition in Halifax, and to again emphasize the position of the Nova Scotia Branch in this matter. The Secretary was further instructed to forward a copy of the resolution to the Government.

Seven members were elected subject to acceptance of the general Executive.

Transportation.

Mr. Miller, Manager of the Transportation Department of the Association, was called upon and gave an interesting and instructive address outlining the work of the department with which he is connected. The meeting was then thrown open for general discussion on transportation matters. Mr. Miller was tendered a hearty vote of thanks.

It was decided to request the Government to remove the restriction that requires that consent shall be secured before the Intercolonial Railway can be sued.

Mr. Dickie referred to the fact that demurrage was charged on the Intercolonial Railway, contrary to the usual practice of railways, when cars were detained through no fault of the shipper, but owing to accident whereby ships to take cargoes were detained by the "act of God." Reference was also made to the lack of accommodation at the Port of Halifax for the shipment of flour.

51 NEW MEMBERS.

Increase for November one of the Largest on Record.

Aylmer, Ont.

Aylmer Iron Works Co., Limited.—Scales and Pumps.

Brockville, Ont.

Abbott, Grant & Co.—Biscuits and Confectionery.
The Cossitt Co., Limited.—Agricultural Implements.
Thousand Islands Mineral Water Co., Limited.—Mineral Waters, Cider, etc.
The Wolthausen Hat Corporation.—Hard and Soft Fur Hats.

Delhi, Ont.

Quance Bros.—Lumber, Lath, Shingles, Moulding, Doors, Sash, Flour and Feed.

Dundas, Ont.

Wm. Clark & Son.—Woollens.

Galt, Ont.

McEachren Heating & Ventilating Co.—Fans, Blowers, etc.

Goderich, Ont.

The Lake Huron & Manitoba Milling Co.—Flour.

Guelph, Ont.

Holliday Bros.—Ale, Porter and Malt.
Page-Hersey Iron and Tube Co., Limited.—Black and Galvanized Wrought Merchant Pipe.
Robt. Stewart, Limited.—Sash, Doors and Flooring.

Hamilton, Ont.

G. F. Glassco & Co.—Furs.
F. W. Hore & Son, Limited.—Carriage, Wagon and Sleigh Woodwork.
Pittsburgh Perfect Fence Co., Limited.—Wire Fence.

Kingston, Ont.

A. Davis & Son, Limited.—Leather.

London, Ont.

The Canada Chemical Manufacturing Company, Limited. (J. E. Smallman, 2nd Member.)
London Show Case Works.—Show Cases, Store, Office and Bank Fixtures.

Montreal, Que.

The Bonner Leather Co.—Tanners, Fine Leather.
A. Corbeil.—Boots and Shoes.
Dawes & Co.—Ale, Porter and Malt.
The Dominion Umbrella Factory.—Umbrellas, Parasols and Canes.
Leonard Bros.—Packers and Curers of Fish.
The R. Mitchell Co., Limited (Kenneth Falconer, 2nd Member).
Robert Reid.—Marble and Granite.
Swift, Copland & Co.—Caps and Furs.

New Hamburg, Ont.

The Hahn Brass Co., Limited.—Furniture Trimmings, Brass, Bronze and Iron.

Norval, Ont.

Robt. Noble.—Flour.

Ottawa, Ont.

Kenneth McDonald.—Lumber.

Paris, Ont.

The Alabastine Co., Paris, Limited.—Alabastine.

Shawinigan Falls, Que.

The Belgo Pulp & Paper Co.—Paper and Pulp.

Sherbrooke, Que.

The Modern Bedstead Co.—Brass and Iron Beds, Springs and Mattresses.

Stratford, Ont.

The Mooney Biscuit and Candy Co.—Biscuits and Candy.
The Whyte Packing Co., Limited.—Pork Products.

St. Marys, Ont.

Ellis & Co.—Fire Extinguishers.

Toronto, Ont.

A. A. Allan & Co.—Furs.
American Tent and Awning Co., Limited.—Tents, Awnings, etc.
Bruce Manufacturing Co.—Ladies' and Children's Headwear.
Canada Law Book Company.—Law Books.
W. E. Chalcraft & Co., Limited.—Clothing.
D. Conboy.—Carriage Trimmings.
Don Valley Brick Works.—Bricks, Tiles, etc.
Ladies' Wear, Limited.—Ladies' Neckwear, Belts, etc.
W. H. Lailey & Co., Limited.—Clothing.
Legg Bros. Engraving Co.—Engraving.
Lumen Bearing Co.—Brass, Bronze and Babbits.
Merchants Dyeing and Finishing Co. (Alfred Burton, 2nd Member).
Paris Wincey Mills (J. Sproul Smith, 3rd Member).
The Reeves Pulley Mn'f'g Co., Limited.—Wood Split Pulleys.
The David Smith Eng. and Litho Co.—Engraving and Lithographing.

Walkerville, Ont.

The Walkerville Brewing Co., Limited.—Beer.

SMOKE CONSUMERS AND FLUE GASES

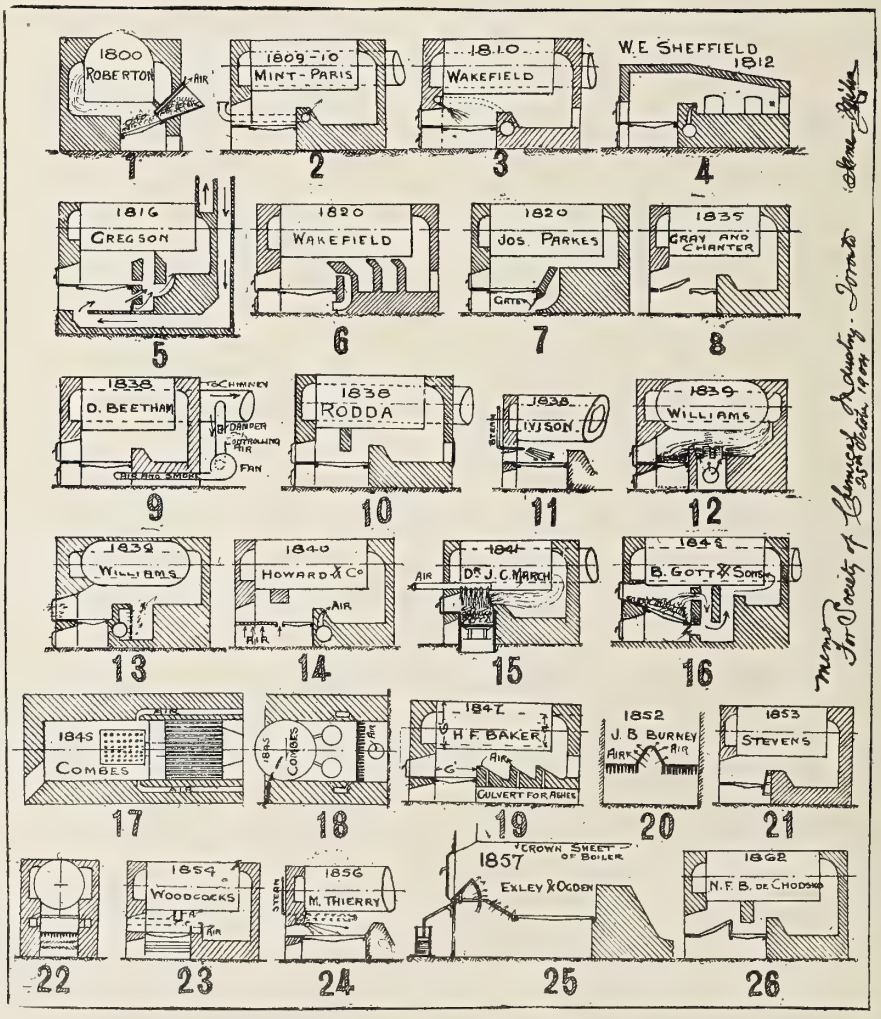
*A Brief Summary of the Various Devices Employed Since 1800, Together with an Explanation of the Principles upon which They Depend.**

BY JAMES MILNE, M.E., E.E.

There was a time when a smoky chimney was regarded as a sign of enterprise, but now it is regarded as an unmitigated nuisance, and when we state that "it is not always the chimney that belches forth the most smoke that does the most work," we state what is pretty near the truth.

There are some stacks in this city where less than one ton of coal is burned per day making more smoke than others where from twenty to forty tons of coal are burned daily, and in these very small plants there is little or no excuse for the nuisance existing.

It is not our intention to go back to the time of Nero, 150 B.C., and trace onwards to see what was done then in the way of abating smoke, for we can with perfect safety assume that more has been done in the way of inventing appliances for abating or trying to abate smoke since the time of Watt than prior to his time. Watt, acknowledged by all as the perfecter of the steam engine, did something also in the smoke abating line. In 1785 he designed what is believed to be the first mechanical stoker, a device for pushing the coal from the front end of the grate towards the bridge after it was coked. It was worked by levers, and the prime object was to prevent smoke when burning soft coal.



Since then the best inventive geniuses in the world have been striving for a smokeless furnace. Failures there have been by the thousand, and to-day there is going on a resurrection of these devices which have been discarded before some of us were born.

Watt also in 1785 proposed to consume smoke by causing the smoke and flame of the fresh fuel to pass through very hot funnels or pipes, or among, through or near fuel which was intensely hot, and mixing it with fresh fuel when in these circumstances. We have in our diagrams some devices which fulfil the condition, and which will be seen later on.

Dating from the time of Watt we find that nearly all of the various devices tried for smoke abatement come under some of the following, either singly or in combination:—

1. Air admitted above the fire at front of furnace.
2. Air admitted above the fire at rear of furnace or in front of bridge.
3. Air admitted at rear of bridge.
4. Double combustion.
5. Brick arches above fire.
6. Hollow bridge walls and air ducts in setting for heating air prior to its entering the furnace.
7. Coking arches in front.
8. Down draft furnaces.
9. Powdered fuel—mechanical draft.
10. Gas furnaces.
11. Mechanical stokers, divided into two classes, viz., over and underfeed, and the overfeed sub-divided into two, viz., sprinkling and coking.

I propose to give a very brief synopsis of these.

Robertson, 1800.

It was not until 1800 that air was first admitted *above the fuel*, J. & J. Robertson, Glasgow, being the first and original patentees. From Robertson's time, one hundred years ago, he admitting of ir independently of that which passes through the grates has been the mainstay of inventors for perfecting combustion of fuel.

Paris Mint, 1809-1810

Some Parisian chemists had proposed and tried a method of running two iron pipes around the furnace from the door to the bridge which was delivered "hot."

This was installed at the Mint in Paris, and for small coal consumptions abated the smoke. This comes under heading No. 2.

Wakefield, 1810.

Air entered at hollow bridge and became heated to some (?) degree and was passed to mouth of furnace and directed downwards onto the fire. No economy in fuel was effected, although some degree of success was attained in abating smoke, so it was reported by Sir Wm. Fairbairn in a report to the British Association on the consumption of fuel and the prevention of smoke, in 1844. This comes under heading No. 1.

W. E. Sheffield, 1812.

Air first introduced at rear of bridge in reverberating furnaces, air pipe built in bridge and air delivered through perforations. This plan is in use to-day in heating furnaces, and there

*Read before the Society of Chemical Industry, Toronto, October 27th, 1904.

is also an additional supply in many cases from the top. This comes, therefore, under heading No. 3.

J. Gregson, 1816.

In cut No. 5 we have a scheme proposed by J. Gregson in 1816, where there are two exits for the gaseous products over and through the bridge, where an upward current of air meets the gases and is mingled with same by a second bridge, after which they pass into the flues. The drawing shows the air supply brought in from below, presumably to gain some heat if it were possible.

Wakefield, 1820.

In No. 6 we have the results of considerable labor and experiment by Wakefield, who in 1810 devised what has already been shown in No. 3. This plan was abandoned, and in 1820 he patented his scheme whereby the air is delivered direct from the bridge into the furnace. This comes under heading No. 2. He also used auxiliary bridges in the combustion chamber to retard the passage of the gases, so as to intermix the smoke and air, and promote combustion. He also had air openings at the side of the furnace so that air would enter above the fire. This would be to some extent a combination of No. 1 and No. 2.

Jos. Parkes.

Josiah Parkes spent some years in endeavoring to abate the smoke at his factory, and No. 7 shows the results of his labors. Air was admitted at the rear of the bridge through a narrow slot the entire width of the flue. With careful attention this plan is said to have not only abated the smoke, but saved considerable fuel.

In "The Steam Engine," by D. K. Clarke, we find the following:—"It may therefore fairly be asked why such a plan fell into disuse, says Mr. Parkes to Sir Humphrey Davy. It is too simple, and depends on the fireman and not on the master, who won't care to understand it and who won't concern himself much about saving coal."

The same testimony was given by a Mr. Houldsworth, who had many years' experience of the system, and he develops the following reasons for the disuse of Parkes' system:—"It was left to the fireman to regulate, and Mr. Parkes constructed his valves so large that they admitted when fully open an excess of air; the effect was injurious both as to the production of steam and the creation of smoke, and the principle not being well understood at the time, practical men adopted the view that it was a bad system and it gradually fell into disuse."

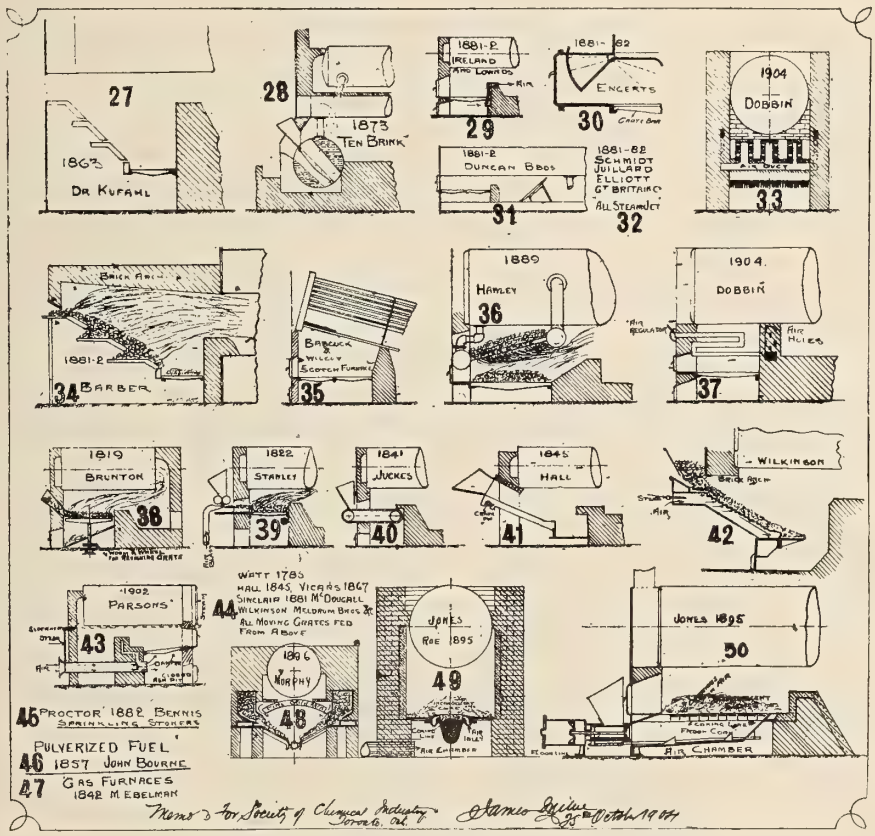
Gray and Chanter, 1835.

A system which was said to be successful to some extent is shown in No. 8. Coal was fired first onto the first grate, and after distillation had taken place it was pushed onto the second grate, and an additional charge put on the first grate, the gases passing over the incandescent fuel on the second grate. The difficulty with the system lies in keeping the second grate covered with fuel so as not to admit an excess of air.

In the next sketch we show an arrangement which is being revived at the present time in Canada. You will see by the date, viz., 1838, that A. D. Beetham devised same. The idea is to take the smoke just before it enters the chimney and, by the aid of a fan, force same, together with fresh air, into the ash pit and then through the furnace. This comes under heading No. 4. Regarding the double combustion method, it is a well-known fact that the inflammable gas (C.O.), together with the unconsumed carbon, comprise a very small percentage of the total gases, and any success that may be derived from this method is due to the additional air supply. C. Wye Williams, in his book on "Fuel and Its Combustion," states that "it is contrary to chemistry and nature." This device is 66 years old.

Rodda, 1838.

In No. 10 we have something similar to No. 8, only the first part of grate is not inclined, but we have the inverted arch additional, which, although it is an improvement in one respect, is a detriment from another point of view. Unless there is a door at the side of the furnace it would be impossible to keep the grates covered behind the inverted arch, consequently this plan would fail entirely for boilers in battery. This is Watt's idea revived, viz., forcing the smoke over red-hot fuel.



Steam Jet.

The steam jet has perhaps the greatest number of resurrections to its credit in the smoke-consuming or preventing line. In 1838 we find that Mr. M. W. Ivison patented same. In his patent it states, "Stream of steam or jets were delivered amongst the gases from the fuel in order by mixing therewith to consume the smoke." Dr. Fyle, of Edinburgh, in a report he made in 1843 states a saving was effected by its use. M. Bell, in the same report, acknowledges, however, on the contrary, there was not any saving, and, according to D. K. Clarke, M. Bell spoke more nearly to the facts. The steam jet is beyond doubt a favorite for beginners in the art, and will always be with us and always new.

In 1856 it obtained another resurrection shown in No. 24, and in 1864 it was subjected to an exhaustive test, and I think it well worth mentioning the important data in connection with same. The tests were made by a committee, of which M. Burnat, an eminent engineer, was reporter. The test was made in France at the works of Dolfus, Meig & Co., and continued for thirty days, with two different degrees of superheated steam, and also with saturated steam.

	First Boiler.		Second Boiler.	
	With.	*Without.*	*With.*	*Without.*
Coal burned per sq. foot grate per hour	22.75	20.09	12.5	11.68
Coal per charge	12.43	9.61	12.28	11.29
Degree superheated	184°F.	....	34°F.	....
Water evap., per lb. coal	6.60	6.62	6.37	6.34

Smoke (in 100 minutes)	*With*	*Without.*	
Black	7	17	Superheated steam.
Light	20	36	
Colorless	73	47	

With saturated steam we had the smoke as follows:—

	With.	*Without.*
Black	10	17
Light	25	32
Colorless	65	51

Superheated steam is, therefore, a little better for the abatement of smoke than saturated. It took 7 per cent. of the steam generated to operate the steam jets.

The following is taken from Kent's "Steam Boiler Economy": —"Jets of steam are sometimes blown into the furnace, above the fire, carrying jets of air with them, on the principle of the injector. That they do decrease the amount of smoke in some cases there seems to be no doubt. Reasons which have been given to explain the action of the jet, and which may to some extent be true, are the following:—

"(1) The diminution of smoke is apparent and not real. Both the air and the steam dilute the smoke and make it less dense in appearance as it escapes from the top of the chimney. The steam also escaping from the chimney as a white cloud disguises the smoke and may condense its bulk, rendering it less visible. Further, the chilling action of the air and steam may decrease the rapidity of production of the smoke in the furnace, extending its production over a long period of time, decreasing its density during that time.

"(2) The jet of air violently driven in by the steam and pointed downwards onto the bed of coal, becomes intimately mixed with the gases distilled from the coal, and then if there is a long run through the hot combustion-chamber, the mixture will be burned, destroying the smoke.

"The steam jet is in itself a wasteful appliance, for even if the steam is decomposed and the gases afterwards completely burned, forming steam again, it escapes from the boiler superheated to the temperature of the flue gases, which temperature is always higher than that of the steam in the jet, and there is a consequent loss of heat due to superheating."

In an article entitled "Smoke Prevention," in the Engineers' Encyclopedia, published in 1889, which treats on the steam jet, it closes by saying:—"But we unhesitatingly give as our opinion that unless the attendant sees that the furnace is kept in proper trim, firing with the least quantity of coal, oft-times replenished, that all the refinements for the consumption of smoke will not attain the desired object, *'for careful firing is the main secret to arrive at.'*"

In an article written by a Mr. H. J. Travis in April "Power," he states:—"It is no doubt well known to your readers that the steam jet is the most expensive and inefficient means we have for providing draft for the combustion of coal in steam boilers. About the only thing that can be said in its favor is that the cost is insignificant and it can be applied to almost any kind of boiler," or, as Mr. Murray says, it can be readily applied without shutting the plant down.

What really takes place with the steam jet is as follows:—The steam must be raised to the temperature of the escaping gases, and with its chilling action must reduce the efficiency of the fuel. Assume that we have 80 pounds steam pressure = 323° F. The temperature of the escaping gases will in all probability be in the neighborhood of 550°. You can clearly see that there must be a loss when the steam has to be raised to that temperature. It takes fuel to do it.

The object of the jet is to induce an extra current of air for the time being, and anything that will do this will answer the purpose; for instance, a fan could be substituted.

This comes under heading No. 1.

Williams, 1839.

C. Wye Williams spent a great deal of time experimenting on smoke abatement appliances, and in 1839 devised what is shown in No. 12. The scheme, according to D. K. Clarke, is a revival of a contrivance introduced by Morris Pollock in 1818, viz., the introduction of air through tubes perforated with small holes near or behind the bridge. Williams' scheme was applied to a boiler in the Liverpool Waterworks. The apertures in the fireclay tubes soon closed up with ashes and the plan finally was discarded and No. 13 substituted. These two plans come under the heading of No. 3.

Howard & Co., 1840.

In No. 14 we have a system that was patented by Howard & Company, Manchester, in 1840. We have fireclay shelf with perforations in same on which the coal was carbonized. Over the top of the shelf was a fire brick arch. The coal as it was coked was pushed onto the ordinary grate at a lower level. The combustible gases passed over the fire of coke and were consumed by air being admitted at the back of the bridge. In this system we have a combination of No. 3 and No. 7.

Dr. March, 1841.

Burning coal from above dates back to 1815, and in No. 15 we have Dr. March's system, for which he obtained a patent in 1841. Coal was raised from below, with an air blast *above* the fuel. J. G. Laurie, in the transactions of the Institution of Engineers of Scotland, testifies to the excellence of this device—"absolutely perfect combustion. There is not in the fire itself nor in any part of the flues nor at the top of the chimney, the slightest indication of smoke," and his explanation is as follows:—"All the air is brought into atomic contact with incandescent fuel and therefore consumed." According to D. K. Clarke the economy effected over carefully tended common firing in tests made by him in 1842, amounted to 11 to 12 per cent. A draft of 1½ in. of water was used.

This system could no doubt be resurrected, as an anxious public is awaiting same. I presume this should come under heading No. 1, and should be classed as an underfeed stoker.

Gott & Sons, 1842.

Gott & Sons, Leeds, examined many systems of smoke prevention, and devised a plan of their own in 1842, shown in No. 16. This looks to be a modification of Gregson's 1816, shown in No. 5. This would come under heading No. 3.

Combes, 1845.

Sketches 17 and 18 show a device which was made by Mr. Combes in 1845 for an experimental furnace for preventing smoke, and I find a practically similar device being put on the market in the United States. Air was admitted by passages in the brickwork, and also through a pipe at the rear of ash pipe to a perforated grid at the rear of the bridge. The coal consumption during the test at maximum rate of combustion was 28 lbs. per sq. ft., and 13 lbs. at lowest rate of combustion. Smoke was prevented as well by the side currents as by the perforated pipes. The following gives the condition of the smoke in 100 minutes when using the side passages:—

Sidepasess	High Rate of Combustion.		
	Black.	Yellow.	None.
Closed	30.4 minutes	24.8	44.8
Half open	1.7 "	38.3	60
Fully open	1.2 "	35.	63.8

From this you will see that the black smoke was done away with. At the slow rate of combustion we have:—

	Black.	Yellow.	None.
Side passes closed	4 minutes	17.4	78.6.
" " half open	——	——	——
" " fully open	1.6	42·	56.4

The quantity of water evaporated per lb. of coal was:—Active combustion, 5 lbs. passages open to 5.38 lbs. passages closed; slow combustion, 4.87 lbs. passages open to 5.3 passages closed, giving averages of 4.93 passages open to 5.34 passages closed, showing very little difference of results for active and slow combustion, but nearly 9 per cent. in economy by not using the air supply beyond the bridge. We see by this test smoke can be abated by great supply or excess of air, but economy must be sacrificed. This comes under heading No. 3.

H. F. Baker, 1847.

In No. 19 we show a system by H. F. Baker, patented 1847, which, with a boiler developing 70 h.p., showed a saving over the ordinary setting. Air is introduced at the crests of the curling flue in the opposite direction to which the gases are flowing. Apparently the proportion of the openings at the rear is quite an important matter, as it was shown that if the area was increased one-third, the evaporation efficiency was reduced 5¼ per cent., and when reduced by one-third, the efficiency was reduced by 2¼ per cent. This still comes under heading No. 3, but has in addition the curling flue.

J. B. Burney, 1852.

In No. 20 we have an experiment by J. B. Burney in 1852 on a steamboat on the Thames. C. Wye Williams made the same experiment in 1839. It consisted of a bent iron plate perforated at the upper part. The effect was very good, the air passing through the slots, burning among the gases with a "beautiful white flame." The bar lasted only three hours and was melted into the ash pit. This comes under heading No. 1 with a slight modification.

Lee Stevens, 1853.

In Lee Stevens' system, shown in No. 21, we have practically the same as that shown in No. 7 by Parkes, and as stated before, unless great care is exercised in regulating the amount of air, the results will be disastrous as to economy and the making of smoke. This comes under heading No. 2.

Woodcocks, 1854.

In Nos. 22 and 23 we have a plan where air is admitted to the bridge through passages in the walls, and in addition we have Venetian blinds below the grates to prevent radiation of heat into the ash pit. This is said to have abated the smoke when running at low rates of combustion. This comes under headings No. 2 and No. 3.

Thierry, 1856.

In No. 24 we have the steam jet as resurrected by Thierry, and tested by Tresca & Silberman, and also by Burnat in 1865, already mentioned. This comes under heading No. 1. Silberman says there was some doubt as to its economy.

Exley & Ogden, 1857.

Inclined perforated dead plates delivered air above the fuel in combination with a perforated sector, opened and closed automatically. There was a full supply of air when furnace was newly charged and gradually closed itself.

A slight modification of that shown in No. 25 was tested by Mr. Burnat at Dolfus, Meig & Co.'s for forty-two days. The difference between that in the drawing and that experimented with consisted in the addition of a firebrick arch placed near the bridge. In one boiler there was a gain of 2 to 3.8 per cent. by the use of the system, and in another boiler in the same plant there was a loss of about 5 per cent. The period of black smoke was reduced, while the periods of grey and light smoke were about the same. This comes under heading No. 1.

De Chodsko, 1862.

In 1835 Gray and Chanter devised what was shown in No. 8, and Howard & Company what was shown in 1840, and we have in 1862 a modification of these. Great trouble was experienced with the second grate. Smoke was considerably reduced, but tests showed that with ordinary grates the evaporation was 7.52 lbs. against 7.3 lbs. with the double grate and arch, a loss of 3 per cent.

Dr. Kufahl, 1863.

Dr. Kufahl invented in 1863 the stepped grate shown in No. 27, which I think was quite a step in advance. We have a few modifications of this grate in some of the mechanical stokers in use at the present time.

Ten Brink, 1873.

In No. 28 we have Ten Brink's furnace. It consisted of an inclined grate placed in a water firebox. I think that this would be more successful if it were placed in a brick setting. There is no brickwork here to radiate the heat. I believe, however, that the black smoke would be done away with. The boiler is of the elephant type, with the firebox casing surrounded by water. Considerable economy is said to have been effected by its use.

Ireland & Lownds, 1881.

In sketch No. 29 we have the system of admitting air at the rear of the bridge again revived. This was one of the systems tried in 1881 for the abatement of smoke. D. K. Clarke, who was the testing engineer, says that although smoke was visible 43 per cent. of the time, the apparatus was very efficient in consuming smoke. The coal used was of an "obstinately smoky nature." This comes under heading No. 3.

In sketch No. 30 we show a very simple system which was successful when great care was exercised. The mode of operating same is as follows:—When the door is opened for charging, the incandescent fuel is pushed back onto the grate, after which the inner end of the shutter is lowered upon the fire in order to prevent the inrush of cold air into the furnace, whilst the fuel is placed on the dead plate and partly on the fore part of the grate. When the fire door is closed the shutter is raised a few inches off the grate so that the gases distilled from the fresh fuel, together with the air admitted under the door, are passed close over the fire and burned together.

The boiler during the test only developed 40 h.p., and the results so far as smoke abatement was concerned, were all that could be desired. This system is purely and simply the coking system of firing, and any very careful man, when the boiler is run light, can accomplish it with good results.

Duncan Bros., 1891.

Duncan Bros.' system, shown in No. 31, consists of an asbestos grid placed behind the bridge. The test was on a boiler developing only 20 h.p., and is of little use to us.

Steam Jet, 1881-82.

Many things were tested by Mr. Clarke in 1881-82 in connection with the abatement of smoke, and we find the steam jet represented by Schmidt, Juillard, Elliot and the Great Britain Smoke Consuming Company. I think I cannot do better than quote Mr. Clarke's own words:

"The systems of Schmidt, Juillard, Elliot and the Great Britain Smoke Consuming Company are all based on the long-known action of jets of steam in inducing currents of air to follow and accompany them. The air is blown over the surface of the fire, and its intermixing with the combustible gases and the consequent combustion are accelerated. None of these systems proved specially successful as smoke preventers."

Dobbin, 1904.

The next shown is the diagram No. 33, which should be taken in conjunction with No. 37, and which shows a system used in Canada at present in Waterloo. It consists of air passing through a duct in the side walls and coming out at perforations in the bridge. There is nothing new in this, as you can readily see.

I have in my notes the following, which I must have taken from a book at some time or other and omitted to give credit for same. As it strikes the point exactly, I think I had better read it:—

"When you know that the centre of a fire under an ordinary boiler is, say, 2800° F., you can readily see that a gain of a few degrees in heating a small quantity of air above that of the atmosphere cannot in any way affect either economy or combustion under ordinary conditions. Take some of the devices where the air enters a pipe or duct located in the setting; the air may traverse two or three times the length of the furnace, and will be heated up some, but the quantity heated up is so small that it is doubtful if any considerable quantity of air ever passed through the flues at all. Take the majority of all these cases where the air is preheated by going through passages in the settings, you will find that there is little or no movement of air in same, and unless you have a positive movement these devices will always be inefficient."

I think that covers these systems pretty fully, and little or nothing more need be said.

The system of Dr. Harris is practically what has been described and the long passage of the air through a small duct cannot allow very much, if any, to pass.

Barber, 1881.

In No. 34 we show an inclined grate so arranged that it can be fired at different landings as it were. The top shelf is the shortest, and the bottom the longest. This system is practically underfeeding with the exception of the top shelf. This inclined grate, in combination with the brick arch above, worked without any smoke being seen at the chimney.

Babcock & Wilcox.

The Babcock & Wilcox Company have what is termed a Scotch furnace, which to some extent might prevent black smoke. We have in this the reverberating action, which has been found to assist combustion and abate smoke somewhat.

Hawley Down Draft.

The Hawley Down Draft, shown in No. 36, consists of two grates, one above the other. The top grate is the one which all the coal is fired on, and the bottom one serves to catch the incandescent coal from above. In plants where boilers do not have to be forced this system is satisfactory, but where fires have to be forced you cannot do as much on them as on the plain grates. They are hard work.

No. 37 has already been mentioned with No. 33.

Wm. Brunton, 1819.

Some people are inclined to think that the Jones Underfeed Stoker is very expensive, but, when compared with Wm. Brunton's stoker, which was among the first stokers ever devised, it looks very cheap indeed. Brunton's stoker consisted of a circular grate running at about 10 revolutions per minute. It sold for three hundred pounds. It is about time this was being reinvented.

John Stanley, 1822.

In No. 39 we have a system by John Stanley, dated 1822, where the coal from the hopper passed through fluted rollers and was then scattered on the grate by a fan. The records do not state the condition of the smoke with this apparatus.

John Juckes, 1841.

John Juckes was a very inventive genius so far as appliances for furnaces were concerned. He devised a travelling grate and other stokers. There are travelling grates in use to-day, and, under certain circumstances they are giving fair satisfaction. Great excess of air characterizes the chain grate system. It also results in a reduction of smoke.

Samuel Hall, 1845.

In 1845 Samuel Hall devised a system of reciprocating grate bars, and No. 41 shows the idea. There are many stokers in use with some modifications of this system, such as Wilkinson, Meldrum Bros., Vicars, Sinclair. Sketches 42 and 44 may both be classed as this style.

Parsons, 1902.

Parsons' system consisted of a steam jet arrangement whereby air is introduced into the ash pit and bridge. The steam pipe is inserted in the side wall, and may to some extent superheat the steam. The air is drawn in from the rear, and as the air pipes pass through the combustion chamber, it may to some extent get heated. This system is said to be fairly successful where poor coal has to be burned, but the general results depend entirely upon the fireman.

The Proctor & Bennis stokers, made by two different concerns, are overfed, and differ from the Vicars and Meldrum Bros., also Wickson, inasmuch as they are sprinkling, while the others are coking stokers. They sprinkle the coal over the grate by flippers. There is no black smoke except when forcing. Light grey smoke is the general rule.

J. Bourne, in 1857, patented fuel in powdered form or dust in currents of air. With properly designed furnaces and proper mixture of air and dust, the chimney is smokeless. We find to-day this system on the market, but it is not meeting with success. The cost of pulverizing the fuel and the heavy cost for maintenance of the pulverizer are against same.

Gas Furnaces.

M. Ebelman, in 1842, devised the idea of transforming solid combustibles into gaseous combustibles, and also made the first practical demonstration of same. Twenty years after that Dr. Siemens introduced the gas furnace in manufacturing industries. One would think that firing by gas generated in a gas producer there would be no smoke, but unless the furnace is properly designed and the mixture of the air and the gas perfect there certainly will be smoke.

In a test made on a Wilson Gas Producer against hand firing, in 1886, we find that after making allowances for the steam used on the producer, there was a gain of 5½ per cent. by the use of the gas. Smoke was frequently visible at the top of the chimney, ranging from light to dark.

The action of the gasogene is as follows:—In the lower position the fuel is burned, and this may be called the zone of combustion; higher up the carbonic acid takes up a further equivalent of carbon, becoming carbonic oxide, and this may be called the zone of carbonization; whilst at the uppermost layers of the producer hydrocarbons are produced in what may be called the zone of distillation.

The functions of gas furnaces are therefore to distill and volatilize the fuel into carbonic oxide and hydrocarbon gases in the gasogene; to conduct the gaseous mixture into combustion chamber—the place where it is to develop the heat—and there to mingle with it the proper proportion of air required for effecting its complete combustion. The combustible and the air are in the same physical condition—gaseous—so that they may be intimately mixed in suitable proportion and with but a slight excess of air.

I have seen some very smoky chimneys when firing by natural gas, but if everything were just right (that is, furnace properly designed and the proper supply of air) there should be no smoke.

Murphy, 1896.

The Murphy Stoker has been quite a long time on the market, perhaps 18 years, and has a good record. It consists of inclined grates, and the coal fed from above by a ram. There is a brick arch above same. When not forcing the boilers this system is practically smokeless.

The Roney is another stoker with inclined grates which has had quite a sale, and in many places has given good results. It is said to be applicable for both hard and soft coal, but my firm belief is that a stoker that is said to be good for both kinds will not give the highest efficiency with either. The stoker business, like everything else, must be specialized.

In figures 49 and 50 we have a scientifically designed furnace, one where the gases are liberated *under* a mass of incandescent coke. The air is mixed with the gases over the green fuel, but below the burning mass under most favorable circumstances, and the mixture must pass through the intensely heated body. The result is that the incandescent coke generates the gas, and the gas after its mixture with the air burns the coke. In other words in the Jones stoker there are combined the simplest and most economical gas producer and gas consumer in one firebox. We have a fire always bright on the top, and there is no opening of the fire doors except when cleaning.

There is practically no smoke with the stoker, except when starting fresh fires, and unless the boilers are forced most excessively, which can be done with the Jones, a coal consumption of 40 lbs per sq. ft. of grate surface is nothing remarkable with it.

This system is the only one where the amount of air and the feed of the coal are controlled automatically by the demands for steam and the boiler pressure.

Transportation Department

THE PACIFIC COAST LUMBER CASE, THE RAILWAY ACT AND THE CANADIAN PACIFIC RAILWAY.

In the issue of October, page 199, a synopsis was given of the complaint filed with the Railway Commission, in Vancouver, by this Association on behalf of the Lumber and Shingle Manufacturers of the Pacific coast.

Decision of the Board.

The decision or order of the Board published in page 276 of the magazine (November issue) is repeated as follows:—

THE BOARD THEREFORE HEREBY ORDERS,

"Under the powers conferred upon it by section 253 and 254 of the Railway Act, 1903, that the Canadian Pacific Railway Company and all other railway companies do hereafter desist from charging a higher or greater rate of freight upon cedar lumber than is charged by them on pine, fir, spruce, and other lumber of like class; and the Canadian Pacific Railway Company and all other railway companies are hereby charged forthwith to give effect to this order."

Position of C.P.R.

Interest in this case has been increased by the following letter addressed by the Canadian Pacific Railway to the Secretary of the Board of Railway Commissioners, under date of November 11th:—"I have the honor to say that a copy of the order made by the Board of Railway Commissioners, on 31st October ultimo, upon the application of the British Columbia Lumber and Shingle Manufacturers' Association, in reference to this Company's rates for cedar, has been handed to me.

"I have the honor to point out to the Board that as to that portion of this Company's system which, is so far as relates to its Tariffs of Tolls, is not subject to the control of the Board, the Company cannot regard the said order as operative, but will treat it as relating only to that portion of its system, over which, in such matters, the Board has jurisdiction."

This letter was signed by the Fourth Vice-President of the Canadian Pacific Railway. It expresses that gentleman's opinion as to the jurisdiction of the Board and possibly the views also of the law department of the Company.

Point to be Decided.

The point to be decided *is not,—"Has the Board the power to make rates upon the main line of the Canadian Pacific Railway?" The point is,—"Has the Board the power through the Railway Act of 1903,* under which it is performing its duties, *of ordering the Canadian Pacific Railway to cease discriminating against, or in favor of particular commodities, individuals or localities?"*

Ten per cent. Clause.

There is no question but that Parliament in granting the charter to the Canadian Pacific Railway disarmed itself of the power of making rates upon the main line of the railway until it is earning ten per cent. of the cost of construction of that portion of the road. No doubt the condition was warranted at that time. It is one of those conditions which seem monstrous to-day, but was intended to make less doubtful what was thought to be a somewhat doubtful speculation.

Rate-making Power.

It may seem hard to disassociate, except by a fine drawn distinction, a rate making power from the authority to correct discriminations. In the concession of a public franchise to a private corporation, particularly the railway franchise, which is one form of a public highway, it is expected that the franchise will be operated (after assuring a fair return to the railway) in such a manner as to assure the best national results. *Whether a fair dividend is assured or not, the legislature cannot contract itself out of that oversight or control of a public franchise, which is required to assure to all under the same circumstances and conditions precisely the same consideration and treatment.* The exemption from control granted to the Canadian Pacific Railway does not divest the people of Canada of the right to demand and require equal consideration for individuals and no discrimination; the right to insist (as the expression goes in the United States) that transportation everywhere shall be sold like postage stamps, that is, at the same price without variation for the same service.

The Exemption Would Apply.

The exemption, it might be stated, would apply where the public might be desirous of securing, upon the main line of the Canadian Pacific Railway, a reduction in rates with respect to some particular commodity, such, for example, as grain, which they (the public) might feel the general and favorable showing of the Company would sufficiently warrant. In this case unless the published rates were abnormally or excessively high in themselves, and as compared with other traffic handled upon the main line of the Company, and as compared with similar rates for similar services in similar territories elsewhere lying, they (the public) would not be entitled by right to reduced rates.

Discrimination Against Cedar.

The lumber case involves the discrimination against cedar lumber. The discrepancies range from ten to nineteen cents per hundred lbs. They are confined, one might say, almost entirely to the rates from Vancouver and Coast mills into Manitoba. The rates from Vancouver, etc., into the Territories do not show a similar discrimination. The rates from the Mountain mills do not show the discrimination into either Manitoba or the Territories. In the East the same discrimination against cedar, though possibly for other purposes, has been emphatically disallowed by the Board (see page 196 of the October number).

Reason for Discrimination.

The real reason for the discrimination from the Coast into Manitoba seems to be nothing more or less than an agreement among the Canadian Pacific, Great Northern and Northern Pacific Railways to hold up cedar rates to what are known as St. Paul and Winnipeg common points; the Winnipeg common points including all Southern Manitoba. It may be in the interest of these United States roads, it may appear in their interest, to thus discriminate. The difficulties from the manufacturers' standpoint are not as acute on the other side of the line, because there is little or no cedar shipped except high grades. Their common cedar and cedar cull are converted into shingles.

What Justifies C.P.R.

There is nothing to justify the discrimination on the part of the Canadian Pacific. In denying the right of the Board to order that a discrimination, which they, after investigation, find exists, to cease to exist, seems to be merely a postponement of the day when the order shall finally be made operative. The railway is not carrying common and cull cedar lumber on the present rates, though, no doubt, a large trade could be done on the present fir rates. What reason then can the railway management have for persevering in what an impartial tribunal has held to be a discrimination and, therefore, an unreasonable action?

Relations with the Public.

The relation between the railways and the public may be an harmonious one, it may be one of frequent disagreements. In any case the railways require reason upon their side. The public possess the power and might be incited to exercise it to curtail the privileges of railway companies.

Power of Board.

That the Board believes itself to be clothed with the power to deal with this question its decision clearly shows.

The ruling of the late Chairman of the Board, the Honorable A. G. Blair, was equally emphatic, when expressed some three or four months ago when this matter was first brought before the the attention of the Board. The decision of the Honorable Mr. Blair is supported by the following quotation from Professor McLean's report of the year 1902: "A question which comes up in this connection is the assumed impossibility of regulating the rates of the Canadian Pacific. While the general rates cannot be regulated until a dividend of 10 per cent. is obtained—in other words never—there is no power conferred to charge unreasonable rates or to make preferences; in this respect this Company would be subject to regulation."

Opinion of C.P.R. Counsel.

No authority, however, should appeal to the Canadian Pacific Railway Company like the authority of its own solicitor in Vancouver, Mr. E. P. Davis, K.C., whose remarks in concluding his arguments in this case are quoted as follows: "So far as discrimination is concerned, I wish to urge this, that the Board, I submit would be limited to directing that the discrimination be removed, but would not be in a position to say you shall only charge so much on this particular thing. That is, they could make an order that that discrimination should be wiped out, but the method of removing this discrimination I submit would be left to the Company."

Difficult to Understand Position of C.P.R.

It is difficult to understand the attitude of the Company with regard to this case. It may have reasonable arguments to sustain its position, of which, so far, neither the public, the Railway Commission, nor the parties immediately interested have been informed.

What will the Board Do?

The Railway Act does not provide the Board with the machinery to give effect to its order. The Board has the power under section 279 of the Act of imposing for each offence (discrimination) a fine or penalty upon the railway of not more than $1,000 nor less than $200. It has also the right to consent to the party wronged entering action for the recovery of treble damages.

CORRESPONDENCE INVITED REGARDING DEMURRAGE AND MIXED CARLOAD RATES.

The following circulars are being issued to members on the question of "Demurrage," and "Mixed Carload Rates." Whatever regulations with regard to these important matters are adopted by the Railway Commissioners will be considered of a somewhat permanent nature. It is in the interest of the Association, individually and collectively, that the representations before the Board be as exhaustive as possible.

"Demurrage."

Toronto, November 25th, 1904.

Dear Sir,—At an early date the Transportation Department of this Association will be required to represent the views of the manufacturers, before the Board of Railway Commissioners, on the question of demurrage, sometimes known as car storage or storage of freight in cars.

No doubt a large body of the Association have experienced difficulty in dealing with the railways on this question.

It will strengthen the representations before the Railway Board if the Transportation Department is furnished at once with particulars of specific difficulties with the railways with regard to demurrage. All manufacturers are invited to send such particulars to the Association's Transportation Department with as little delay as possible, supported by any documents that they may have available.

Please bear in mind that all communications are confidential.

For the Railway and Transportation Committee.

W. H. D. MILLER,
Mgr. Transportation Dept.

"Mixed Carload Rates."

Toronto, November 26th, 1904.

Dear Sir,—Complaints have been made of difficulties with the railways arising from the withdrawal of the basis for making mixed carload rates formerly in force in classification No. 11, but withdrawn in classification No. 12.

The rule of classification No. 11 admitted the mixing together for carload rates of commodities of various kinds, so long as each commodity was provided in the classification with a carload rate.

In classification No. 12 the railways abandoned the broad principle of making mixed carloads, and introduced a narrower one known as the principle of distinctive headings, under which latter principle only commodities which fall under certain headings were entitled to be mixed together for carload rates.

The representations of the Association before the Railway Commission in Toronto were instrumental in securing a reinstatement of the broader mixed carload privilege east of Fort William, that is, in the Provinces of Ontario, Quebec, New Brunswick and Nova Scotia.

The discussion upon classification is likely to be resumed at an early date. In order that the broad privilege of classification No. 11 may be restored for all traffic in Canada, the Railway and Transportation Committee recommends that members shipping mixed carloads communicate to the Transportation Department particulars as to the usual makeup of such cars, with particulars of difficulties, if any difficulty has been experienced, with the railways with respect to mixed carloads.

This matter is sufficiently important to command early attention. It is hoped that members will assist by furnishing information as promptly and explicitly as possible.

Please bear in mind that all communications are confidential.

For the Railway and Transportation Committee.

Yours faithfully,
W. H. D. MILLER,
Mgr. Transportation Dept.

TOWER CANADIAN OILED CLOTHING CO. vs. THE C. P. R.

In the August issue of INDUSTRIAL CANADA, reference was made to the complaint of the Tower Canadian Oiled Clothing Co. against the Canadian Pacific Railway, which was laid before the Board of Railway Commissioners during the sitting of their Court in Toronto in June last. The decision of the Board, which has just come to hand, requires that a third-class rate should be put in effect to cover the carload movements of oiled clothing. The order of the Board reads as follows:—

"IT IS HEREBY ORDERED

"That the interested railways do grant commodity rates on the third-class basis on oiled clothing in carloads of not less than 20,000 lbs., from Toronto, Ontario, to Halifax, Nova Scotia; Winnipeg, Manitoba; and Calgary, Alberta; and to such other points as the complainant may be able to show that they can ship in carload quantities."

TRADE PUBLICATIONS.

Electrical Supplies.—One of the most persistent advertisers in the Association is the Canadian General Electric Co., Ltd., Toronto. Scarcely a week passes without some of their literature being placed on our desk. They are now at work upon a new electrical supply catalogue, which is being issued in sectional form. Each section is attractively bound and correctly perforated, so that it may be inserted in their Bulletin binder, a device which other manufacturers might copy to advantage.

Wood-Working Machinery.—A catalogue of more than usual pretensions has been issued by Cowan & Co., Galt. It is a quarto volume of 164 pages, printed on coated paper and bound in board covers. The illustrations include a number of handsome and costly half-tone engravings photographed direct from the object, some of them being so large as to require a folded insert. An immense variety of wood-working machines, for use in planing mills, furniture factories, etc., are described. The book all through is a most creditable production, and one upon which this enterprising firm is to be congratulated.

BROCKVILLE'S "MADE IN CANADA" FAIR.

Magnificent Display of Canadian Goods and Splendid Manifestation of Patriotic Feeling.

The "Made in Canada" Exhibition which was held in Brockville during the week ending November 12th, was one of the most successful functions of the kind ever witnessed in this country. In its well-sustained attendance and financial results, in the extent and variety of the displays, and in its broadly educative influences, it far surpassed all previous exhibitions of this nature held within the Dominion.

The Hamilton Fair, under the auspices of the Daughters of the Empire, was necessarily limited in its scope by the admission only of goods for women's wear or for use in the home; the extreme remoteness from large manufacturing centres acted as a serious handicap to the exhibition arranged for by the King's Daughters of Victoria, B.C.; but the Brockville Fair was broadly representative of the industrial life of the whole Dominion. Exhibits from the far-away Yukon, from the mines and forests of British Columbia, and from the wheat fields of the golden West were to be seen side by side with the products of Ontario's busy workshops, and those of the provinces by the sea.

The fact that the proceeds of the Fair were to be devoted to carrying on the work of the Brockville General Hospital ensured a loyal support from all tributary territory, while to the energetic management must be given credit for the large number of displays from outside points.

Space for the accommodation of manufactured goods was at a decided premium, and a number of intending exhibitors had to be disappointed. Those who were fortunate enough to be represented had their displays tastily arranged; they included almost every branch of manufacture, and were well calculated to convey some conception of the wide range and excellent quality of goods made in Canada.

A feature deserving of special note was the great historical march, given every evening during the entire week. It was a happy inspiration, the execution of which must have entailed much trouble and expense, but it was heartily entered into by all the participants, and was carried through with a dignity and on a scale of grandeur which never failed to evoke the most enthusiastic applause from the spectators. The march was designed to illustrate the early history and development of Canada, from the time of Jacques Cartier down to the present, and to portray by typical costumes the industrial life of the Canada of to-day. The dress of the Indians and early pioneers was reproduced with remarkable exactness; the habitant and the lumberman in holiday attire, the sailor lads and fishermen from New Brunswick and Nova Scotia, the cowboy from the plains, all were to be seen fraternizing together, the whole forming a picture not soon to be forgotten.

Among the manufacturers who contributed to the success of the exhibition were:—Gowans, Kent & Co., Dunlop Tire Co., Toronto Carpet Mfg. Co., Mason & Risch, Heintzman & Co., Pugsley, Dingman & Co., E. W. Gillett Co., Pure Gold Mfg. Co., Delaney & Pettit Co., and Chandler & Massey, all of Toronto; Williams Mfg. Co., Canadian Rubber Co., Geo. Gale & Sons, Bovril, Ltd., Canada Paint Co., and the Slater Shoe Co., of Montreal; Ontario Glove Works, Wolthausen Hat Corporation, and Canada Carriage Co., Brockville; Goold, Shapley & Muir, Brantford; Edwardsburg Starch Co., Cardinal; St. Croix Soap Mfg. Co., St. Stephen, N.B., and others.

THRESHING MACHINERY MEN ORGANIZE.

New Section of the Association—Mr. A. W. White Chairman—Death of Mr. Macpherson.

On October 13th and 14th representatives of the leading threshing machinery manufacturers of Canada met together in the Board of Trade, Toronto, for the purpose of organization and to discuss matters of common interest.

The following gentlemen were present:—John Goodison, D. F. Macpherson, A. Filshie, P. A. McDonald, E. W. B. Snider, H. P. Coburn, R. Harmer, T. S. Depew, R. Bell, W. H. Mason, T. A. Rowan, A. W. White and C. D. Massey. Mr. McIntyre, representing the J. I. Case Co., was also present by invitation.

The meeting was addressed by Mr. R. J. Younge, who explained the nature of the work accomplished by sections of the Association, and by Mr. W. H. D. Miller, who spoke on questions of rates, stop-overs, and return shipments. After discussion it was decided that the organization should take the form of a section of the Canadian Manufacturers' Association, to be known as the Threshing Machinery Section. A constitution and by-laws were adopted, and the following officers were elected:—Chairman, A. W. White, The Geo. White & Sons Co., Ltd., London; Vice-



A. W. WHITE, CHAIRMAN,
Threshing Machinery Section.

Chairman, W. H. Mason, American-Abell Engine and Thresher Co., Ltd., Toronto; Secretary, R. J. Younge.

A large number of interesting questions were introduced for discussion, and decisions were reached tending to bring about more harmonious and concerted action among firms engaged in the manufacture of threshing machinery.

The section is one which has a wide sphere of usefulness ahead of it. Its organization meeting was marked throughout by the deepest interest on the part of all the members, and if the number and variety of questions yet to be discussed are any criterion, the new section bids fair to become one of the most active in the entire association.

A gloom was cast over a subsequent meeting of the section, held in London, on October 25th, by the untimely death of Mr. D. F. Macpherson. Mr. Macpherson was a member of the old established firm of Macpherson & Hovey, Clinton, who only recently joined the association. He had gone to London to attend the meeting of his section, where he was taken suddenly ill, death ensuing before the unfortunate man could reach his home. He had taken a most active part in the organization of the section, and the remaining members cannot but feel most keenly the loss which they have sustained.

RETALIATION AND PREFERENCE

Eminent British Economist Advocates General Tariff on Foreign Manufactures, with Differential Duties in Favor of the Colonies. Necessity of Adequate Protection for Canadian Industries Fully Recognized.

Twenty-five years ago Mr. William Farrer Ecroyd, the father of Fair Trade in England, wrote as follows in reference to preferential trade arrangements with the colonies:

"Our first and highest end should be to consolidate and strengthen the Empire, and so to give to all its citizens in England and elsewhere, the sense of belonging to a great Nation, still in the vigour of its youth, and possessing varied and inexhaustible resources; a nation, therefore, which, though disappointed at the policy of selfish isolation pursued by others, needs neither to be perplexed nor dismayed, but to turn with courage and promptitude to the alternative still left, which, though less profitable to the general interests of mankind than the course she would have preferred, may prove scarcely less profitable to her own."

The November number of the National Review contains an article on "Retaliation and Preference" signed "Fair Trader," which was written by Mr. Farrer Ecroyd, although his name does not appear. This article is of especial interest to Canadians because it recognizes the fact that under any system of preferential trade Canada must be expected to maintain adequate protection for Canadian industries. Mr. Farrer Ecroyd's article is as follows:

Offences Against Reciprocal Trade.

It is quite evident that no measure for applying such pressure as shall induce foreign nations to lower the tariffs which obstruct our export of manufactures to them can be really effective, so long as import duties on articles of food are rigidly excluded.

The greatest offenders against reciprocal trade, for example, are the United States and Russia—our chief imports from whom are articles of food and raw materials for our industries. In neither case can we act seriously upon them by retaliatory duties on their manufactures exported to us. Nor can we tax raw materials required for our own manufactures. What we may do is to impose duties upon such of their food products as can profitably be grown in our own dominions, whilst admitting them from the latter tax-free.

By means of very moderate differential duties, we could with sufficient rapidity transfer the trade at present enjoyed by such nations, who refuse reciprocal treatment to our manufacturers, to Canada, to India and to other portions of our own Empire—whose development we should accelerate, and whose prosperity and wealth we should promote and increase.

Retaliation Impracticable.

It would be both unfair and invidious to attack with retaliatory import duties this or that other nation, in order to compel a reduction of tariffs far less outrageous whilst doing nothing effectual to bring the greatest offenders to reason.

Besides—to look at home for one moment—no interest has suffered so severely from the competition of untaxed foreign imports as that of Agriculture; from no industry have such a host of laborers been continuously driven out; in no other case have the physique and stamina of the nation been so injuriously affected, as by this displacement of rural population and its enforced migration into crowded towns.

Under these circumstances, could we expect them to regard with any degree of approval or satisfaction the institution of import duties for the defence or relief of other industries, whilst their own was treated with stern and resolute neglect?

This would indeed be a fatal political mistake, as well as a grievous act of injustice.

I neither like the word "retaliation" nor the idea of fiscal policy which it conveys to my mind. I do not see how any permanently good result is to be attained by "striking back" in specific cases with special duties; moreover, we are unable, as I have already said, to retaliate in this pacific manner upon the United States or upon Russia, whose tariffs are the most flagrant. And even were this not the case, such a policy must imply a very complicated and inconvenient tariff. Also I confess that I have no hope or expectation that the nations who have built up great industries under the shelter of high protectionist tariffs, can be either persuaded or intimidated into any such reduction of those tariffs as would really open their home markets to us.

Protection by a Small General Tariff.

What we can and may do is to protect our own home market against their injurious invasion of it. It is the greatest and most valuable market in the world, and if they choose to pay the price of exclusion from it—or a more disadvantageous position in it, in order to close their own against us, we may well accept the position. Our own market, the growing trade with the Colonies and India, and with the half-civilized nations of the world, may well content us.

For this purpose a general import duty on foreign manufactures, averaging 10 or 12½ per cent. ad valorem, would probably be found adequate. Of course we should exempt certain articles from it, or mitigate it in the case of others, as might appear most desirable in the interest of the full and remunerative employment of our own population. Half manufactured products would no doubt be in some cases admitted at lower rates or possibly duty-free, whilst many articles of pure luxury might well bear a heavier duty.

The details of the tariff would be arranged in accordance with the best and most painstaking examination assisted by all available information. Whilst it could not be expected to be perfectly effectual at every point, it might well protect us in the main against injurious "dumping" and against the unfair and destructive competition of goods produced by cruel sweating, and by labor employed on longer hours and less humane and guarded conditions than our own beneficent legislation permits;—and any nation offering us free trade could be exempted from it.

It has been often remarked that no import duty on wheat and flour which public opinion would sanction, could avail to increase arable cultivation to such an extent as would repeople our rural villages and give renewed life and vigour to agricultural industry. Yet this is an object of such vital importance to the welfare of our country from so many points of view, that I can conceive nothing more worthy the resolute effort of the statesman; and in regard to it I would venture to make one suggestion connected with the proposed tariff.

Objections Answered.

It is continually objected by the opponents of fiscal reform that import duties on manufactures would raise the cost of living of the laboring class, and thus depress their condition and increase the cost of production in this country. To me this argument appears ridiculous, considering the unlimited capacity of internal competition in a country where so much capital and enterprise are always seeking better scope for employment, and where Sir H. Campbell-Bannerman's 12 millions(!!)of half starved wretches are waiting to be drawn into the ranks of organized and remunerative industry; but this by the way.

But at any rate it is very clear that there is a large section of our import of manufactures which would bear a duty of 15 or 20 per cent. without imposing any burden whatever upon the laboring class—and probably without any considerable diminution of the import; for example, silk manufactures, laces, millinery, haberdashery, "Articles de Paris"and other objects of luxury. Let the revenue derived from their taxation be set apart and devoted to the rehabilitation and encouragement of arable cultivation. Out of it a premium of 5s. per quarter could probably be given on the growth of wheat, and (to prevent any opening for the enemy to blaspheme) it might be made dependent on proof of no advance of rent.

The revenue to be derived from taxing articles of luxury, such as I have instanced, may be regarded as in the main permanent, as the manufacture of them at home hardly (except in the case of the plainer articles) agrees with our national aptitudes.

But under the prosposed import duty, we might expect to recover to some considerable extent the manufacture of these plainer articles, and so increase the employment of our own people, and the revenue from import duties on these would of course be temporary and diminishing.

I think it the best and wisest course, therefore, to impose a general tariff on foreign manufactures, based on our position as affected by the increasing exclusion of our manufactures from foreign markets, and the consequent necessity of reserving the home market as a steady basis of employment for our industries. It is so unlikely that an offer of reciprocal free-trade will be made to us by any nation which now exports manufactures to this country, that I do not think the question worth present consideration.

Imperial Preference.

In regard to the nations which export to us articles of food—should a few years' experience of the innocuous effects at home of small differential duties in favor of our Colonies dispose public opinion in this country to such a further step, it might be desirable to double those duties in the case of countries whose tariffs against our manufactures of metals and textiles exceeded in any case 25 per cent. ad valorem. This might possibly induce countries like Argentina to separate themselves from the policy of United States and Russia, and to refrain from stimulating by exaggerated import duties the artificial growth of manufactures for which they possess very inferior natural advantages.

However great the importance of responding cordially to the action of Canada in granting, and of other Colonies in offering, a substantial preference to imports from the Mother Country over those from foreign nations, and of obtaining fair contributions from the Colonies towards the defence of the Empire and the protection of its sea-borne commerce, it is essential to shew, in all we do, the most genuine and unfailing respect for their legislative independence, and for the right of each to act on its own initiative and in its own way and time, in these matters.

I am, therefore, entirely opposed to any attempts to bargain with the Colonies, individually or collectively about the giving or receiving of preferential fiscal treatment. Let us act in the same manner in which they are shewing a disposition to act towards us; let us frankly and without stipulating for this or that favour in return, grant to the rest of the Empire—India as well as the Colonies—such preferences over foreign countries as we find from time to time practicable and consistent with the interests of our own population and its industries.

Empire Building.

In this way, both sides acting along the lines of least resistance, we may hope gradually to build the Empire into a unity as solid and co-operant as the United States, an end well worthy of ten times the efforts and sacrifices which would be called for from its members.

We had, only a year ago, an excellent illustration of the practicability of this method of proceeding. The small import duty laid on wheat and flour, etc., whilst raising 2½ millions of revenue. did not increase the price of bread, nor diminish the comforts of the poorest, nor disturb the course of trade and industry.

Had it been doubled, and the produce of our Empire exempted from its operation, its effect on the price of bread would probably still have been quite imperceptible.

It would, however, have operated to accelerate the settlement of Canadian wheat lands; for a clear advantage of 7½ per cent. in this, the greatest importing country, would not only have induced new settlers to choose Canada rather than the United States, but would have driven many farmers to remove from the States to Canada to escape the necessity of sacrificing the amount of the duty in order to keep hold of the English market.

And this object,—the promotion of the more rapid increase of our own Dominions in population and wealth,—should be in my opinion, the great and prevailing purpose of an alteration of our fiscal policy.

We speak indeed of obtaining more favorable,—more preferential,—terms for our manufacturer in the Colonies. But let us never forget that even subject to their import duties, and witho the preferential terms which, in the warmth of their hearts, th are now offering us, every Canadian was already in 187[illegible] as lar a customer as 35 Russians, and every Australian as 16 citizens the United States.

What, I venture to ask, would have been the position of ou Empire to-day had the movement of population and capital bee 20 years ago, by the wise initiative of our Government, thus dir ected to the development of our own territories and the conse quent production there of more of our own food and raw materi ials? I cannot but believe that our Colonies would to-day hav possessed three times the population and wealth they now do.

It is their vigorous growth into great, populous and wealthy nations that we should look to, rather than stipulate for th greatest preference we can obtain in their markets. Let them grow and prosper as they might and ought to do, by our l towards them—and I have no fear of their response toward or of the vastness and security of our trade with them.

Adequate Protection for the Colonies.

As they grow in population, wealth and resources, they s sure to develop manufactures to a large extent. In this we sho rejoice—as a proof of their many-sided capacity and activi whilst the scope afforded in this country for the more per organization of the higher class of manufactures would als secure us a sufficient share of the common industry. And thi they might probably adhere to a moderate system of protec duties for the encouragement of a more varied national l. am quite convinced that they would never raise them to an structive and hostile level against a Mother Country w treated them with such natural favor and affection.

In this connection we should never leave out of sight the ap proaching exhaustion of that rich and liberal supply of coal, th possession of which did so much to give us the start in the race o manufacturing industry. As it gradually fails (and in the absenc of any important reserve of water power) our manufactures wi necessarily be placed at a greater and greater disadvantage—especially those, which like the cruder forms of iron and stee require for their production a very large amount of coal in pro portion to the labor they employ.

How important, both for our own interests and those of th Empire, that, as this condition of things draws nearer, these industries should not be allowed to drift into foreign countries but that the foundation of their transfer should be gradually and with timely foresight laid in the most favourable localities within our own dominions—foremost of which might probably be reckoned the extreme eastern provinces of the Dominion of Canada.

TRADE PUBLICATIONS.

Gas and Gasoline Engines.—In addition to windmills, the Goold, Shapley & Muir Co., Ltd., of Brantford, have gone in extensively for the manufacture of gas and gasoline engines, of from 2 to 25 h.p. A booklet just received claims for their "Ideal" ga engine the advantages of simplicity in its parts and economy in its consumption of fuel. They refer with confidence to a long list of present users of their products, from a number of whom grateful words of appreciation appear.

Automatic and Traction Engines.—An attractive-looking booklet dealing with the advantages of a new type of automatic engine, has just been received from the Robt. Bell Engine and Thresher Co., Ltd., Seaforth, one of the latest manufacturers to join the ranks of the Association. Mr. Bell's company also make traction engines, threshermen's supplies, and a general line of sawmill machinery, descriptive catalogues covering which we are pleased to acknowledge.

Printing.—The Mail Job Printing Co., Ltd., Toronto, have been distributing among their many customers samples of their finer productions in the way of booklets and folders. Those we have been favored with are particularly good samples of the printers' art, combining happily a marked degree of taste with general ex cellence of presswork.

Labor Column

THE APPROACHING CONFERENCE WITH LABOR.

That representatives of the largest Canadian organizations of labor and capital are to meet in conference to discuss ways and means for the prevention and settlement of labor disputes, means something to the general public of the Dominion, as well as to the workingmen and manufacturers. The strikes reported in Canada during the past year involved a loss of 671,227 working days—a fact affecting the happiness of many homes, and the prosperity of the whole country. Across the border, the situation is much more acute, the past year having developed some of the most appalling conditions which could possibly ensue from industrial differences. It is with the desire to avoid the possibility of such conditions occurring in Canada that representatives of the Trades and Labor Congress of Canada, and of the Canadian Manufacturers' Association, will come together in their first conference this month. It is not to be expected that every difference existing between employers and employees can be immediately adjusted. There are a few questions upon which unanimity can scarcely be hoped for; but if the leading men on both sides can come together with the earnest desire to eliminate strife and promote feelings of friendliness and co-operation, there is little doubt but that good will result. The average Canadian workman is fair and manly. He desires peace and prosperity. In many cases he is opposed to strikes which are thrust upon him through foreign influences and agitations. It can be said with equal truth that Canadian manufacturers do not desire war with their employees. There are cases on record where they have sacrificed even principle to preserve peace. And certainly the Canadian public, who finally must bear the large share of the losses incurred through labor disputes, will follow with deep interest any movement which will tend towards reasonable arbitration and peaceful settlement.

We feel sure that the conference will be conducted, not with a view to destroying helpful relations which exist to-day between employers and employees respectively, but in the endeavor to bring about the larger union between the hearts and minds of citizens of a common progressive country.

EMPLOYMENT OF PRISON LABOR.

A deputation representing the Dominion Trades Congress waited upon the Ontario Government recently to ask for certain changes in the conditions regarding the manufacture of brooms at the Central Prison.

The broom factory at that institution is one of the largest and best equipped in Canada, employing on an average about 35 hands. The Government is under no expense for wages, beyond the pittance allowed for board and maintenance, and with the splendid facilities they possess they can easily market their output at a price which makes it extremely difficult for other manufacturers to compete with them.

Labor men ask that the machinery be removed so that all the work will have to be done by hand. They also urge that the output be reduced to an amount more nearly approaching the requirements for public institutions, and that any surplus product which it is necessary to place on the market should be labelled "prison-made," in order that the buying public may be given a chance to discriminate between prison and free labor goods.

The problem as to how prisoners can be most advantageously employed is a much vexed one, and one which, in some form or other, is constantly forcing itself upon the attention of the public. The moral and physical welfare of the men demands that they be kept busily at work. Many prisoners find a useful occupation in carpentering, cooking, blacksmithing, or in making boots or clothes, for the maintenance of large public institutions requires the services of men in all of these callings. Moreover, in the pursuit of these occupations the prisoners are furnishing themselves with the means of earning an honest livelihood when the time comes for them to mingle once more in society. To this form of employment there would seem to be no objection. But there must necessarily be a large number of prisoners whose services cannot be utilized in this manner, and it is in the attempt to cope with the difficult problem of providing these latter with employment that the Government have encountered the opposition of free labor.

The suggestion to do away with the use of specialized machinery in the manufacture of brooms may be met with the objection that such a practice would mean a reversion to out-of-date methods; it would be giving the prisoners a training in an art which they could not practice in after life. The custom of hiring prison labor out among contractors is equally objectionable, in that it opens the door to political favoritism, and interferes with the employment of free workmen.

In connection with large public works there is sometimes an opportunity of employing convict labor to advantage, but the relief is only temporary, and no permanent solution of the difficulty seems possible in this way. Again, the suggestion has been made that the price of prison labor should be kept up as near as possible to the price of free labor, and that the money thus earned should be paid to the unfortunate wives and children of those in disgrace. This suggestion has much to recommend it, and will doubtless appeal to the more charitably inclined. But, after all, there is a deep-seated opposition in the public mind to the principle of allowing prison labor to compete with that of free and law-abiding citizens, and it is this fact which makes the ultimate solution of the problem so difficult for the Government.

BREWERY ARBITRATORS' AWARD.

The Board of Arbitration appointed by the Master Brewers' Association of Toronto and the members of the local union to adjust the brewery workers' wages, concluded their labors on November 5th, after a series of eight meetings. The whole matter was made the subject of most careful investigation, and the decision arrived at was unanimously concurred in by the appointees of both sides to the question.

The arbitration developed from an agreement signed by the employers and the union on the 7th of June, 1904, in which it was provided that after the signing of that agreement each of the parties should appoint two arbitrators, none of whom should in any way be connected with the brewery business, and the four so appointed should constitute a Board of Arbitration, to hear the evidence submitted by each of the parties as to the proper scale of wages, and to make their award on such evidence, but the award was not to provide for a scale of wages lower than the compromised scale settled by the agreement on June 7th, nor higher than the scale of wages demanded by the men in April, which called for an advance of from 12½ to 15 per cent. on the wages then paid.

It was further stipulated that special consideration should be given to the claims of so-called "first" men, and men who had not received any advance under the compromise of June 7th.

Terms of the Award.

The award of the Board makes it binding upon the masters to recognize the union. Only members of the local union shall be employed, but a provision is made whereby old employees, not members of the union, who hereafter join the union, may be retained by the master brewer. A list of all unemployed members

of the union shall be kept by the secretary, and when help is needed by the master brewers it may be selected from this list. In case a brewer desires to employ a certain man, not a member of the union, but in every respect competent to perform the work for which he is required, it shall be incumbent upon the union to accept such a person into their membership, upon payment of the customary initiation fee.

The scale of wages adopted by the Board provides for further increases of 50 cents per week in the case of single drivers and men employed in the ale cellars, and places the fermenters in the ale department on an equal footing with the fermenters in the lager department. The "first" man in any department is defined as one who is charged with the responsibility of looking after other employees. Such a person is, by the award, entitled to an advance of $1 per week over and above the wages paid to the other men in that department.

Other clauses prescribe the hours which shall constitute a week's work, provide for re-engagement after recovery from sickness or an accident, and outline the procedure to be followed in cases where an employee has been discharged.

Arbitration a Success.

That this strike, which was the cause of so much animosity and bad feeling, should at length have been settled in a manner so eminently satisfactory to both sides, is a distinct vindication of the principle of arbitration as applied to the settlement of labor difficulties. In nearly all matters of this kind there is some middle ground upon which both sides can stand without prejudice to their respective interests. The problem is to find that common ground. Men whose opinions are naturally biased by reason of the financial interest involved, are not the men who should say what the terms of the compromise shall be. Their vision is distorted, they are swayed by their sympathies, and their judgments are inaccurate. But disinterested parties, who will sit down together in a reasonable frame of mind, prompted by an earnest desire to arrive at a fair and just decision, can in the majority of cases, if they will calmly and dispassionately review the facts as presented to them, arrive at a basis which will be mutually satisfactory.

The arbitrators in the present instance instituted a most thorough and exhaustive enquiry. They visited the breweries and made a personal examination of the duties required of the operators in each department. Their award was based upon an intelligent understanding of the whole case, and was a unanimous one, joined in both by the representatives of the employers and the representatives of the men. It is worthy of comment also that the Board were able to dispense with the services of a fifth or seventh man, whose decision so frequently gives rise to dissatisfaction. As in the case of two other arbitrations referred to in these columns, that of the brassworkers and that of the pianomakers, an equal number of arbitrators were appointed from each side, and negotiations were continued until all could agree.

The interests of the employers were looked after by Messrs. P. W. Ellis and F. B. Polson, while the brewery workers were represented by Messrs. D. A. Carey, member of the Executive Council of the International Order of Musicians, and Alfred J. Raynor, ex-President of the Trades and Labor Council. When men so prominently identified with the interests of the employers and the laboring men respectively can arrive at a satisfactory solution of a vexed problem such as this, it affords a splendid illustration of how much more desirable it is to leave the adjustment of difficulties to a board of arbitrators, rather than to attempt to settle matters by resorting to strikes, lockouts and other objectionable tactics.

PROPRIETOR PREVENTED FROM WORKING IN HIS OWN SHOP.

The following letter from the Manager of the Moore Printing Company, Winnipeg, appeared in a recent issue of the Manitoba Free Press. The situation which it outlines is a most curious one, and illustrates the absurd extreme to which labor men are sometimes carried by a strict adherence to union principles. The letter reads:—

"Kindly allow me space in your paper to correct the statements which are being circulated with regard to our pany over our recent differences with the typographical un

"The strike which was called by the said union was by our refusing to lay off the operator of one of our ma who is a member of the firm.

"The machine in question is an automatic typesetting ma the first of its kind shipped into western Canada, and as operator could not be found here to work the machine, with the exceptio of one man whom we had already in our employ, the factory ad vised us to send a man to their school to learn the work. As a considerable expense was entailed, it was necessary to have a reliable and steady man, and a member of the firm was chosen to undertake the work. The typographical union refused to allow our man to work in the shop, on the ground that he was not a union man, and although we offered to have him join the union, he was again refused, on the ground that he had not served a term of years at the case, although competent on the machine, where no knowledge of the case work was necessary.

"We give this information to enable the business men of the city to get the actual facts of the situation, trusting that they will support us in our claim 'that every man has a right to work on his own premises in which he has spent his money to build up a business.'"

In conclusion, the letter says the company have not been seriously handicapped by the strike, and that in future they will run an open shop.

MORE TROUBLE IN QUEBEC SHOE TRADE.

The ever present friction between the local unions in the Que bec shoe factories and the International Shoemakers' Union ha led to a fresh outbreak of trouble. Press reports indicate tha Quebec manufacturers have been experiencing considerable diffi culty of late in disposing of their goods through the West, where the International Union is the ruling power. The operators in Quebec have a union of their own, known as the National Union, which is entirely independent of the international organization. It is thought that western labor men have been boycotting Quebec shoes, with a view to forcing the National Union to ally itself with the larger and more powerful organization. Steps were taken some time ago by Quebec employers to have their workmen become members of the International Union, but the latter steadily refused to entertain the proposition. For their own protection they recently began to employ men who did not belong to the National Union. One firm, Tourigny & Marois, applied to the agents of the International Union for assistance. They were quickly supplied with a number of outside workmen, whose appearance at the factory was the signal for a demonstration of hostility on the part of the members of the National Union.

It was finally agreed to refer the matter to the Arbitration Committee established by His Grace Archbishop Begin. Under their award, which has just been been made public, the local workmen have resumed operations under the same conditions as formerly, though the justice of Tourigny & Marois' claims were fully recognized. It seems hopeless to expect a satisfactory solution of the Quebec difficulty until more amicable relations have been brought about between the National and International organizations.

RECREATION ROOM FOR EMPLOYEES.

A novel feature in connection with the large factory now being erected in Hamilton by The Frost Wire Fence Co., Ltd., is the generous provision that is being made for the comfort and entertainment of the employees. Space has been set apart for a recreation room, which will be fitted up with pool tables and nicely furnished. Current literature will be kept on file for those of a more serious turn of mind. Some vacant property adjoining has been acquired, which will be turned into grounds for out-of-door sports, and the company will encourage their employees to enter teams in local hockey, football and baseball leagues.

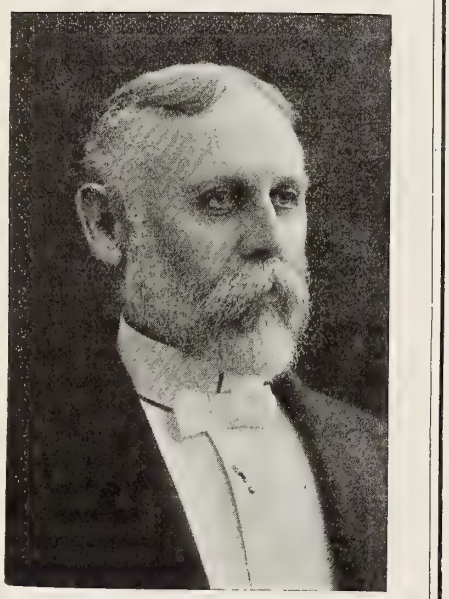
Among the Industries

THE MANUFACTURERS OF CANADA.

Cyrus Albert Birge, President of the Canada Screw Company, was born near Oakville, Ontario, in November, 1847. His father, Herman P. Birge, was a farmer who originally came from Hartford, Conn., while his mother was of Canadian birth.

At the little country schoolhouse near his home he received the rudiments of an education which was afterwards supplemented by a course in the Oakville Grammar School. At the age of eighteen he began to learn the dry goods business, but this was soon abandoned for the study of medicine. Ill-health supervening, he returned to a mercantile career, establishing himself in a grocery business in Stratford in 1870. Two years later he entered the employ of the old Great Western Railway as accountant in the engineering department, a position which he filled with great satisfaction for ten years.

His connection with the Canada Screw Company dates from the year 1882, when he assumed the management. The works were



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then located at Dundas, Ont., and were operated as a branch of The American Screw Company of Providence, R.I. The employees numbered only about fifty men, and the company was in bad shape financially. In 1887, five years later, the plant had to be enlarged. The company was re-organized, capitalized at half a million dollars, and removed to Hamilton, where new buildings were erected. In 1898 Mr. Birge bought out the interests of the United States shareholders and became President of the company, which has ever since been a purely Canadian corporation.

At the present time the works give employment to over two hundred men. Branches have been established at Toronto and Montreal, while the products are marketed from Halifax to Vancouver.

Mr. Birge is a member of the Toronto and Hamilton Boards of Trade. He is identified with a number of city clubs, and is Vice-President of the Caledon Mountain Trout Club. In religion he is a staunch Methodist, and for several years past has taken a prominent part in the conferences of that body.

For nearly twenty-five years he has been an active member of the Canadian Manufacturers' Association. In 1900 he was elected Vice-President for Ontario; in 1901 he became Vice-President for the Dominion, and in 1902, at the annual convention in Halifax, he was promoted to the Presidency. To the discharge of his public duties he has brought to bear a rich fund of progressive ideas and a comprehensive grasp of the commercial problems of his country. His services on behalf of the Association have been rendered loyally and in unstinted measure, and have earned for him the gratitude of his fellow-manufacturers in all parts of Canada.

I. Matheson & Co., New Glasgow, N.S., are building for the Government two immense steel barges to be used in connection with the dredging operations in the East River.

A charter has been granted to the Rose Bank Lumber Co., Ltd., who propose to erect a large sawmill and factory at Rose Bank, N.B. Oscar W. Norden will be President of the company, which is capitalized at $75,000.

The Bull River Falls Power and Light Co. have completed plans for the construction of a most unique power plant in South-east Kootenay. By means of a flume two miles long the entire water of Bull River will be diverted for several months in the year, leaving the bed dry for mining operations. When completed it will be able to supply 10,000 h.p. to the different mining properties in the vicinity of Cranbrook.

The entire output of the Woodstock Wagon and Manufacturing Co. for Ontario and Quebec has been contracted for by the Frost & Wood Co. of Smith's Falls, for a term of years. The Woodstock firm will continue its agencies in Manitoba and the West.

The immense car shops of the British Columbia Electric Railway at New Westminster are practically completed, and operations will be commenced at once. The forepart of the building consists of a huge barn, where the actual work of construction will be done. At the rear are carpentering and machine shops and a blacksmithy. A planer, lathes, saws, bolt-cutters and other requisite machinery have been installed, making the plant a thoroughly efficient one.

Another mill for the manufacture of steel products is in sight for Canada. Paul Koch and Jules Weill, representing the Compagnie Generale des Products Metallurgiques de France, recently visited Montreal and Ottawa, where they made extensive enquiries regarding the prospects for marketing their goods in this country. They are also investigating the iron deposits of Canada, and if the general outlook seems favorable they will recommend the establishment of a branch factory at either of the above-mentioned places.

Work has been completed on the new chair factory for Crowe & Nichols, at Stratford, Ont. The building is of cement, and the latest improvements in the way of equipment have been introduced throughout. The boiler and engine were supplied by the Stratford Mill Building Co.

Tenders have been called for the erection of the Canadian branch of the Royal Mint at Ottawa. The building, which will be of the prevailing Gothic style, will be 165 x 220 feet, three stories high, with a one-story extension for workshops. The plant will include a melting house, a weighing room, a pressroom for stamping coins, an assay room, washing and pickling room, rolling and cutting room and grinding room. The total cost will probably exceed $300,000.

The American Horseshoe Co., with headquarters at Easton, Pa., will erect a branch factory at Hamilton, Ont. A seven-acre site has been secured near the smelting works, upon which they will put up a building 300 feet long. One hundred hands will be employed to start with.

On the 29th of August last the Nova Scotia Steel and Coal Co., of Sydney, C.B., started the fires in their new blast furnaces. Since then they have steadily continued the manufacture of pig iron, and recently made application to the Government for over $5,000 earned in bonuses.

The pulp mill at Chatham, N.B., has been purchased by the Nashu Paper Co., of Nashu, N.H., who, it is understood, will put it in first-class condition and run it to its fullest capacity. The output will be used in the Nashu mill.

Lt.-Col. Gartshore, manager for the McClary Mfg. Co., states that his company intend making extensive additions to their plant in London. They will put up a new warehouse 100 x 240 feet, and enlarge the moulding shop so as to accommodate the moulders now working in their Hamilton branch. These, with the stove-mounters, polishers, and others needed in finishing the work, will increase their staff by 50 to 60 per cent.

A contract has been awarded to the Pacific Coast Pipe Works for over two miles of wire-bound wooden stave pipe. The pipe will be used in connection with the waterworks system now being installed at the Trail smelter.

The Manitoba Gypsum Co. will instal a large amount of new machinery this winter. They are now cutting ties for their new tramway to the quarries, and will begin track laying as soon as the snow is off the ground in the spring. An additional boat will be built for their work on Lake Manitoba. It is stated that a remarkable increase has taken place in the use of gypsum products for building in the West.

The Walsh tannery, the oldest industry in the town of Hastings, Ont., is to be greatly enlarged, following the incorporation of the company. John A. McGrath, formerly associated with the Lang tannery in Ottawa, and John Lang, of Berlin, who has withdrawn from the Ottawa business, have taken a considerable financial interest in the new company.

Mineral paint in paying quantities has been found on the premises of Alfred Cooper, near Fort William, in the Slate River Valley. Experts who have examined the article pronounce it to be of first-class quality. Mr. Cooper has already refused two flattering offers for his property.

The managers of the American Axe and Tool Company are looking for a suitable site in or about Montreal, the idea being to establish a tool works here to better look after their Canadian trade. They have at the present time three large factories in the United States, but believe that they can extend their business in this country very materially by building a branch here.

The discovery is reported of a rich deposit of corundum in Methuen County, near Peterboro'. Samples have shown a specific gravity as high as 3.99, while that of good corundum is 3.85. The value of the metal is placed at $390 per ton.

The beet sugar industry is reported to be prospering in Alberta. At Raymond, the Knight Sugar factory is in continuous operation, handling 300 tons of beets daily and turning out 1,000 sacks of sugar.

Extensive additions have recently been made to the machine shops of the Robb Engineering Co. at Amherst, N.S., which now rank as the second largest in Canada.

A new shoe factory, equipped with all modern improvements and labor-saving devices, has been put into operation in Montreal by the Eagle Shoe Company. Their address is 360 Providence St.

A new flour mill company propose to start business in Ottawa on a large scale. They will be known as the Maple Leaf Flour Mills Company, and will have an authorized capital of $1,000,000. D. C. Cameron, of Winnipeg, and J. D. Flavelle, Lindsay, are among the promoters.

As illustrating the remarkable expansion of Winnipeg during the past year, The Telegram states that nearly thirty miles of water mains have been laid without beginning to meet the absolute necessities in that line. Electric installations undertaken by the city have numbered 1,700, and the number is being added to at an unusual rate.

An export lumber mill, of a capacity of 200,000 feet per day, is to be built forthwith on Clayoquot Sound, west coast of Vancouver Island, by United States capitalists who have acquired immense areas of standing timber in the vicinity of Kennedy Lake.

The Manitoba Brewing and Malting Co. have completed work on their immense plant in Fort Rouge, Winnipeg, and when all the branches now projected by the company are in operation theirs will be the largest brewing concern in Canada. The Fort Rouge plant is said to work automatically from first to last, effecting a great saving over old methods in time and labor.

The Simpson Company's factory in Berlin, Ont., now under control of the Canada Furniture Manufacturers, Limited, is to be closed and the machinery and equipment moved to Waterloo, where it will be merged with the new Shafer Killer Co. factory, also in the syndicate.

It is announced that the Canadian Pacific Railway will start work in the spring on another immense elevator at Fort William, with a capacity of 2,000,000 bushels. They already have five elevators there in operation, with a combined capacity of 8,050,000 bushels.

William N. Sawyer, of Pittsburg, has been appointed General Manager of the Sault industries, in place of Cornelius Shields, deceased. The works are said to be paying again, and the interest on Government loans and mortgage bonds will be met out of the earnings.

Plans have been completed for the $200,000 power house of the South-western Traction Company, which will be erected either at Lambeth or near St. Thomas. The station will furnish power for the operation of thirty miles of electric railway in the neighborhood of London.

The Pictou Smelting Works, which were erected some few years ago at a cost of over $200,000, have been purchased by the Halifax capitalists comprising the Inverness Copper Co., Ltd. It is announced that they will be put into condition at an early date for the treatment of copper, gold and other ores.

The assets of the United Canneries Co. were sold at auction in Vancouver, November 18th, for $119,500. The properties comprise the English Bay, Gulf of Georgia and Scottish-Canadian salmon canneries, the latter two of which are situated on the Fraser River. The purchaser was Mr. O. M. Malcolm, who has been operating the three plants under lease from the United Canneries during the past two years.

The Dominion Iron and Steel Co. will shortly have to put on a night shift in order to keep pace with the demand for wire rods. Satisfactory progress is being made with the rail mill, and it is expected that it will be ready for operation at the date announced.

A New Brunswick charter is being applied for by John S. McLennan, of Sydney, and others, who propose to do business under the name of The New Brunswick Iron Company, Ltd. Their share capital will be $1,000,000, and their operations will consist chiefly in prospecting and mining. The head office will be at Lepreaux, N.B.

The Peterboro' Shovel and Tool Co. expect soon to be in operation with a force of 100 hands. They are dismantling an inactive United States plant in Virginia, and moving the machinery to Canada. Mr. Frank Forsythe, of Hamilton, will be factory superintendent.

The Perth Flax and Cordage Co., Ltd., recently added to their establishment at Stratford, Ont., a plant for the manufacture of all grades of commercial twines. Jute, hemp and flax are utilized for this purpose, a large proportion of their raw material consisting of Canadian-grown flax and tow.

On the occasion of a recent visit to the wireless telegraph station at Glace Bay, C.B., Marconi, the inventor, stated that it would be the largest, best equipped and most powerful yet erected, and would be among the most important wireless telegraph posts in the world when the entire system was completed.

Foreign Trade News

Agricultural Implements.

Russia.—The Journal de St. Petersbourg announces that there has recently been an unprecedented demand in the Siberian Province of Yeniseisk for all kinds of modern agricultural implements and machinery.

The war has wrought a violent change in the methods of the farmers in this district, who were formerly content to cultivate their lands with the most antiquated form of implements. Now, however, that so large a number of able-bodied men have been requisitioned by the military authorities, the farmers have been compelled to order hastily all kinds of labor-saving machinery and perfected implements, and the sale of modern ploughs, threshers, reapers, etc., has shown an abnormal increase; in many instances the local agents have found their stock exhausted.

The use of binders among the more wealthy farmers has become quite general, and the smaller cultivators, impressed with the advantage of these labor-saving devices, have endeavored, wherever possible, to hire them from their wealthier neighbors.

Chile.—The agricultural implements in general use in Chile are, according to the journal *Export* (Berlin) of a most primitive type, being modelled on those formerly used in Spain. However, the importation of modern implements, such as reapers, binders and threshers, has increased of late years, and promises to develop still more in the future. A few farmers also use modern ploughs and seeders. There is likewise a demand for machinery for flour mills, of which there are a large number at work in Chile.

Brooders and Incubators.

South Africa.—A deep interest is being manifested everywhere throughout South Africa in the subject of poultry breeding. The climate is said to be well adapted to the industry, and the handsome profits to be made from it have led farmers and others to go in for this trade on a large scale. As a result, there has been a growing demand for all kinds of incubators, brooders, feeding appliances, etc. The use of these articles in connection with the breeding of ostriches is also coming into more general use. They require, of course, to be more roomy than those for fowl, and to be provided with increased heating arrangements. While breeders and farmers are quick to appreciate the merits of a good apparatus, they place little store on varnish and exterior finish, so that manufacturers catering to this trade would do well to avoid increasing their cost by unessentials of this nature.

Commercial Travellers' Tax.

Bermuda.—The Department of Trade and Commerce in its report of November 28th, publishes the following letter from the Colonial Secretary of Bermuda:—

"In reply to your letter of the 24th ultimo, I have the honor to inform you that samples brought by commercial travellers to Bermuda, if of commercial value, are liable to duty in this colony, they being as a rule subject to ad valorem duty at the rate of five per cent. No duty is levied if the samples are of no commercial value.

"There are no standing regulations on the subject, but arrangements exist by which double the amount of duty may be deposited in view of re-exportation, and the samples can, if desired, be shipped at either of the two ports of the colony. The period within which the re-exportation must take place is not limited, but any deposit made is, as a rule, adjusted within two months of the date of importation.

Duty on Advertising Matter.

Australia.—The question of charging duty on magazines, etc., containing 15 per cent or more of advertising matter has been under consideration, but it has been decided that for the present, at any rate, no such charge will be made on advertising matter contained in bona fide newspapers, magazines, or other printed literary matter. Duty, however, at the rate of 3d. per pound has been in force since September 1st, 1904, on all catalogues, price lists, and trade circulars, introduced through the post or otherwise, whether sent as single copies or in bulk. Exporters may, if they so desire, weigh the matter in bulk prior to posting, assess the duty at 3d. per pound, and forward the amount payable to the postmaster-general at Melbourne for transmission to the customs department.—*U. S. Consul-General, Melbourne.*

Dried Fish, Lumber, Provisions.

Panama.—Under date November 14th, British Consul Mallet writes INDUSTRIAL CANADA as follows:—"In the Republic of Panama, commercial travellers may show samples, which are admitted free of duty, without having to pay any tax, but in order to sell goods a license is required, which costs twenty dollars silver or ten dollars U. S. gold.

"With a renewal of the canal works under the supervision of the United States Government, which are to be commenced in earnest early next year, there should be a good market for Canadian dried fish, lumber and all provisions not produced in the tropics, and I venture to suggest that it might be worth the while of Canadian firms if they combined to defray the travelling expenses of an agent to visit the Isthmus next year, and study upon the ground the opportunities that will be offered by the canal works to increase the exports from Canada to the ports of this Republic.

Mexican Currency.

Banking facilities are as good in Mexico as in any other country. Banks here are not so much hampered by restrictions in matters of loans as are the national banks of the United States. There are several banks of issue in this district. They are required to keep a silver reserve equal to one-half of their note circulation. The instability of the Mexican silver dollar, the value of which has ranged from 40 to 46 cents United States currency, and the consequent fluctuations of exchange, have injured United States trade with Mexico, for the reason that the Mexican merchant prefers to deal in domestic products and manufactures, knowing that the "peso," regardless of such fluctuations, is a dollar in the home market all the time.—*U. S. Vice-Consul, Mexico.*

Miscellaneous.

Argentina.—There is a good opening in the Province of San Luis for the following articles:—Agricultural machinery of various kinds, apparatus for butter and cheese making, copper dairy utensils, cream separators, refrigerating machinery, iron water pipes, machinery and tools for metal work and wood work, cranes for scaffolding, sewing machines, cheap clocks, porcelain tiles, acetylene gas lamps and apparatus, fine steel in bars for toolmaking, and, generally speaking, all kinds of tools and machinery for various trades.

Wearing Apparel.

South Africa.—The white population, like their kith and kin across the seas, will have the very best, both in food products and wearing apparel. The 5,000,000 of colored people from Hottentot to Malay, on the other hand, purchase the cheaper articles, and flannels and fancy dress goods are chiefly worn by the natives are fond of bright colors and showy patterns. Colored Canton when absent from their kraals. Hitherto these flannelettes, cotton blankets, and other products, chiefly of cotton, have come from Germany. Small parcels, however, have also reached here from Montreal, and have opened out very satisfactorily.—*Canadian Commercial Agent, Cape Town.*

ARGENTINA AND CANADA

Agricultural Students from the Great South American Republic are Delighted with this Country—Paving the Way for More Intimate Commercial Relations--Argentina's Wonderful Growth and Possibilities for Trade.

"Every time I think of my departure from Canada I feel deeply sad because I wish not to think it will perhaps be forever," said Senor Don Jorge Peltzer, a member of one of the most influential families of the Argentine Republic, who, in company with a number of other Argentines, has been attending the Agricultural College, at Guelph, Ont. "After having made so many good friends," he continued, "and having lived in such a fine and hospitable country, it is impossible not to take it but as our second motherland. It is for this reason that beside the rising sun of our Argentine coat of arms I have placed inseparably united the maple leaf of Canada."

Between four and five years ago the Government of the Argentine Republic decided to send twenty young men to North America to study scientific farming, dairying and cattle raising, the object being to provide professors for the various agricultural colleges being founded in that country. That great national importance was attached to this move is evident from the fact that some two hundred of the cleverest university graduates were asked to compete for these positions, and that the twenty selections were made by order of efficiency. A number of these young men recently completed a four years' course at the Ontario Agricultural College, at Guelph, and having graduated in the customary time, notwithstanding the handicap of the English language, which they have acquired since coming here, are about to return to their home in the far south to enter upon the work confided to them. Besides representing the best intellect of the rising Argentine generation, they are the sons and relatives of the most notable financiers and public men of that up-to-date Southern Republic, and as such the probabilities are that they themselves will in future have much to do with the government and development of their country.

It was originally intended that these students should be trained in the United States, and that they should be sent by the Argentine Minister at Washington to the various agricultural colleges of that country. That the majority of them came to Canada instead was due to the influence of Mr. Arthur D. Campbell, a Canadian who for a number of years carried on business in Mexico, Central America and South America, spending some time in the Argentine Republic.

The names of the Argentines who have graduated at the Agricultural College, at Guelph, are as follows: Juan Rivara, Julio Panelo, Alberto Fernandez, Jorge Peltzer, Ricardo Bustamante, Cesario Avila, Roberto Martinez. The following entered the college at a later date and are now in their second and third years: Fernando Panelo, Delfin Bustamante, Joaquin Granel, Alberto del Carril, Argentino Subiar, Alejo Moine Carranza, Eurique Fernandez, Eurique Godoy.

A Bond of Union.

The stay of these young men in Canada is likely to be the means of bringing Argentina into very close touch with our Dominion. Not only have they written glowing letters about Canada to their friends at home, but they have been visited while at the Ontario Agricultural College by some of the most eminent citizens of their Republic. Among the notable Argentines who have been guests of the students at Guelph are General Meliton Panelo, a distinguished statesman and financier and intimate friend of President Roca, Don Ernesto Nelson, special representative of the Argentine Chambers of Commerce at the Pan-American Exhibition, and Dr. Jose Subiar, Inspector-General of Argentine Public Schools. All these visitors have travelled extensively in Canada, expressed themselves as well pleased with what they have seen, and in their own country have since written and said much of a nature calculated to strengthen the friendship of the two countries and to pave the way to invaluable commercial relations. A book lately written by Dr. Subiar in the Spanish language, and now being circulated throughout South America, deals with the respective educational systems—especially in agricultural matters—of the United States and Canada, and in proof of the author's sincerity in preferring that of this country, he has lately transferred one of his own sons here from a college in the United States. General Panelo in company with two of his sons who were studying at Guelph and another son who was at college in England visited the principal towns and cities of Canada from Quebec to Vancouver.

Owing to the agreeable personalities and the many estimable traits of character shown by the Argentine students in their social life in Canada, they have from the first been universal favorites in Guelph, not only with their fellow-students and the professors of the Ontario Agricultural College, but with all with whom they have come in contact, and in departing for their own country they will take with them the sincerest good wishes of a large circle of friends.

Some years ago Mr. Arthur D. Campbell, through whose efforts the Argentine students were brought to Canada, was appointed to the position of Canadian Trade Agent in the Argentine Republic and Uruguay by Sir Richard Cartwright, the Minister of Trade and Commerce, but, owing to the fact that business interests in Canada shortly afterward demanded his attention he was unable to remain in Argentina. He is now residing in Toronto, and has been connected with the Canadian Manufacturers' Association for some time past. When interviewed regarding the prospects of developing trade between Canada and the Argentine Republic Mr. Campbell said:—

Argentina's Development.

"Few Canadian who have not visited the Argentine Republic or made a study of the present status of that country, are aware of the wonderfully rapid growth and ever increasing commercial importance of this, the most progressive and prosperous of the South American States. It has been the custom in the north to couple all South American countries with the reputation for sloth and revolutionary waywardness gained by the smaller and less stable independencies of the northern and north-western sections of the southern continent, but, in truth, Argentina, like Mexico, has long since emerged from the conditions which make civil strife there anything but a very remote possibility. During the last decade especially has the advancement been great. Thousands of miles of railways are being rapidly laid in all directions, and immense areas of fertile lands opened up, electric lighting and traction are being introduced everywhere, new ports have been opened and old ones improved, while commercial treaties with neighboring republics have been entered into and old international difficulties amicably settled by arbitration.

"Buenos Ayres, which is the finest city south of the equator, has now close upon a million inhabitants. Its streets, which are wide, splendidly paved and lighted, are kept scrupulously clean. Telegraph, telephone and electric light wires are laid underground, and while its architectural beauty would do credit to any city of this hemisphere, the number, beauty and tastefulness of the parks and gardens cannot, perhaps, be surpassed in any city of the world.

Industrial and Commercial Aspects.

"Argentina is not as yet, however, in the front row as a manufacturing country, nor will she soon become so, on account of the high cost of power. Coal does not exist except in very remote regions and at great distances from transportation, and it consequently has to be imported at heavy cost from Wales and other distant countries.

"Her commercial strength and source of future wealth consists in her millions of square miles of rich grazing lands where countless sheep and cattle can fatten undisturbed by frost and snow, as well as her splendid areas of grain-producing pampa. It is in appreciation of this and pursuant of a wise and far-seeing policy that the Argentine Government during the last few years

has made strenuous efforts to foster and improve in every way these sources of national wealth. The highest prices have been paid in both Europe and America for breeding cattle of the best blood, agricultural and veterinary colleges have been established in different parts of the republic, and the students who have been attending the Ontario Agricultural College will, on their return to Argentina, take professorships in these schools.

"The Halifax Board of Trade a short time ago passed a resolution asking the Government to provide direct steamship communication between our ports and those of the eastern coast of South America, as it is known that the thirty or forty millions of people tributary to the ports of Brazil, Uruguay and Argentina, import many millions of dollars worth of merchandise which they cannot themselves advantageously produce, but which we should be able to supply as cheaply as any country in the world, while, on the other hand, these southern countries can send us many things which we now buy in other markets. In anticipation of war with Chili, and prior to the arbitration treaty arrived at, Argentina acquired a strong navy, including a number of transports, which have subsequently been employed by the Government in a mercantile service between Buenos Ayres and the less important ports of Patagonia and Argentine Tierra del Fuego. I understand that the Government of Argentina could easily be induced to have some of these transports sent to Canada as an initial step toward establishing a permanent steamship service. If such an offer should be made to the Canadian Government I think that it should be seriously considered. The importance of the South American markets is fully recognized by our neighbors across the line, and although as yet the bulk of manufactured goods are imported from European countries, strenuous efforts are being made on the part of the people of the United States to secure substantial footholds in those markets. Why, then, should not Canada, under such favorable circumstances, secure a reasonable share of this trade?"

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

149 **Abrasives and Sharpening Tools**—A **Brussels** firm desires to obtain the addresses of manufacturers of the above. Satisfactory references will be provided on request. The firm has been established more than eighty years.

150 **Agencies—Birmingham**—A correspondent in **Birmingham, England,** represents important English houses at present and is particularly interested in building specialties and is desirous of representing Canadian firms. He is also open to consider other lines.

151 **Birmingham**—A correspondent in **Birmingham** who offers to give Canadian manufacturers as references and who is personally conversant with large buyers of woodenware, hardware, etc., desires Canadian agencies.

152 **Birmingham**—A **Birmingham** correspondent who is an engineer and a foreign traveller with an old established connection in Europe, Northern Africa and Western Asia, is desirous of procuring Canadian agencies. He visits the more important cities in the districts named regularly and forwards a number of very important recommendations. Copies of these will be forwarded on request.

153 **East London**—A correspondent in **East London, South Africa,** personally acquainted with Canadian business and sending Canadian references, desires to be appointed agent for Canadian firms. He has been travelling in South African colonies for some time past, and says that this is the only way that business can be worked up.

154 **Kingston, Jamaica**—A young man who has had several years' experience in the wholesale liquor, provision and shipping business is starting in business as commission agent on his own account and solicits agencies from Canadian firms. He forwards good references.

155 **London**—A manufacturers' agent in **London, England,** who has travelled Great Britain, Germany and France, and has established connections, more particularly in hardware, labor-saving machinery and furnishings, desires a Canadian agency. United States, Canadian and English references can be obtained, and security is offered if necessary.

156 **Apples**—A **London** fruit importer wishes to increase his trade in Canadian apples, and has requested to be placed in touch with reliable shippers.

157 **Beans**—An enquiry is received from **Bluefields, Nicaragua,** for white navy beans, f.o.b. Toronto, or f.o.b. New Orleans.

158 **Butter, Cheese, Eggs**—A firm of wholesale importers of colonial and foreign produce have requested to be placed in touch with Canadian exporters of butter, cheese and eggs.

159 **Chairs (Barber) and Electric Alarms**—Enquiry has been received from **Melbourne, Australia,** for barbers' chairs, upholstered in plush and leather. The same letter asks for particulars regarding systems or plans for electric burglar alarms. Banks and other financial institutions in Australia are contemplating installing some such devices. This enquiry is from a firm well known to the Association.

160 **Cocoa, Biscuits and Confectionery**—Inquiry is made by an **English** firm for the names and addresses of the cocoa, chocolate, biscuit and confectionery manufacturers of Canada.

161 **Confectionery, Liquors, Furniture**—Correspondents in **Constantinople, Turkey,** who are merchants, manufacturers' agents, insurance agents, etc., desire to represent Canadian shippers in the above or allied lines.

162 **Cylinders, Pulverizers, Apparatus for the Manufacture of Beer**—A correspondent in **Santa Cruz de la Palma, Canary Islands,** asks to be put in touch with manufacturers of cylinders for nitrate of soda and potash, pulverizers for bone and apparatus for manufacturing beer on a small scale.

163 **Eggs, Cheese, Butter, Etc.**—A **London** firm of produce importers desires to get into touch with reliable Canadian shippers of eggs, cheese, butter, dairy produce generally and canned goods.

164 **Extracts, Tanning**—A firm in **Hamburg and Berlin** advise us that there is an opening for quantities of oak tanning extracts, and they desire to be put in touch with shippers of the same.

165 **Fasteners, Paper**—A firm in **Chicago, U.S.A**, who hold a patent for a paper fastener, desire to get in touch with a Canadian manufacturer who will make the same. The fastener is a simple piece of stamped sheet metal.

166 **Fish (dried), Potatoes and Lumber**—A wholesale importer of the above in **Havana, Cuba,** desires to correspond with Canadian shippers of the above.

167 **Flour, Oatmeal, Cheese, Wheat, Straw, Apples, Turkeys**—A company established in the wholesale business for two years in **Cardiff, South Wales,** desires to get in touch with shippers in the above lines.

168 **Fruit**—A **London** firm in the fruit trade is anxious to extend its trade to Canada, and has asked to be placed in communication with exporters in the Dominion.

169 **Hair**—A firm of wholesale hair merchants established in **Bradford, England,** since 1894, desires to purchase cattle and goat hair washed and dried in five to ten ton lots. Quotations are asked f.o.b. Liverpool. Payment will be made cash on receipt, or 80% against documents. References are forwarded.

170 **Handles**—Inquiry has been made by an English firm for the addresses of Canadian manufacturers of wooden handles—shovel, pick, fork, etc.

171 **Hay (pressed), Copper Ore, Mispickle Ore, Aspen or Birch Wood**—An important export trading company in **Antwerp** asks for prices from manufacturers of the above lines. Quotations are wanted c.i.f. Antwerp, and payment will be made cash against documents.

172 **Houses (Portable)**—A **Brussels** correspondent asks for the names of Canadian firms manufacturing wooden buildings. A large business offered.

173 **Incubators and Foster Mothers**—An enquiry has been received from **Melbourne, Australia,** for the above. At present they are largely imported from the United States.

174 **Irons (Chair)**—A **London, England,** firm desires to secure the addresses of Canadian manufacturers who make the iron work for revolving and tilting arm chairs.

175 **Leather**—The English agency is required for Canadian sole and upper leather by a person who will be visiting Canada in the early part of next year.

176 **Mica and Asbestos**—Inquiry is made by an English firm regarding mica and asbestos deposits in Canada, and for names of owners of such properties.

177 **Machinery (Flour)**—An enquiry has been received from **New York** for the names of Canadian manufacturers of machines for manufacturing banana flour.

178 **Nails, Tacks, Wire, Bolts, Nuts and Spokes**—A firm of engineers and contractors who have been in the wholesale iron and steel business for the past 25 years in **London, England,** desire to purchase the above lines for England, South Africa and Australia, and ask for quotations c.i.f. different ports. Payment will be made cash against documents. Two banks are forwarded as references.

179 **Paper (Printing in Rolls, Manila, Wrapping and Book)**—A correspondent in **Kingston, Jamaica,** already representing Canadian firms, desires to secure an agency in the above lines.

180 **Polishes (All kinds)**—A correspondent in **London, England,** who is the head of a firm of general cleaning contractors to important bodies such as the London City Council, etc., desires to get in touch with Canadian manufacturers of floor, metal, boot, harness and other polishes. He desires the agency for these goods, and states that they are in a position to introduce them to the largest buyers. They send their bankers as reference.

181 **Rushes**—Inquiry has been made from **England** respecting supplies of rushes from Canada similar to those found in marsh bog country on the west coast of Ireland.

182 **Seed (Timothy and Clover), Oatmeal and Flour**—A correspondent in **Christiania** having connections in Norway, Sweden and Denmark, desires to secure agencies in the above lines. A number of very desirable recommendations are forwarded.

183 **Trunk Material**—A local enquiry is received from a man about to start manufacturing trunks in Newfoundland for such articles as hinges, trunks, canvas, tin, locks, corner pieces, ornaments, etc.

184 **Wringers (Clothes)**—A **New York** export commission house is in the market to purchase clothes wringers for export trade.

THE PURE FOOD PROBLEM.

Those who use and consume food products in Canada ought to be vitally interested in the decision of the United States Government to enforce their law, which requires that imported food products shall bear a descriptive label, giving the exact contents of the package offered for sale. There is no reason why any true well-wisher of pure foods should object to the use of such a label being demanded.

It has long been a matter of regret to advanced thinkers along these lines that imported goods should be allowed to come in and be sold in our markets, regardless of what they contain, while our own products are subjected to the requirements of the Act. Those who know can give many instances of foods which are sold here and which are not pure, and, taken in conjunction with the cheapness with which they can be produced as compared with our charges for packing materials, these foods constitute a distinct and dangerous competition to the disadvantage of home-made products.

At the same time there are certain things which must be used in the preparation of foods which, to a greater or less degree, constitute adulterations. Most foods need a preservative, and some kinds of foods need more or less coloring matter to produce a uniform product. Everyone surely knows that no two batches of strawberries, for instance, are of the same color, and it is therefore necessary to decide upon a natural color which is reasonable, and to reduce the entire product to a uniform shade.

We firmly believe that the Canadian public will not be satisfied until it is treated fairly in the matter of pure food. It is useless to say that one section of the country is quite satisfied to take adulterated goods, and that therefore they ought to be allowed to buy them. Those who have any intimate knowledge with the retail business know that the consumer nearly always pays the price of a good article over the counter, while the goods he receives are frequently adulterated. Any increase of profit by reason of adulterated goods being sold goes into the pocket of the vendor, and is therefore an imposition upon the consumer.

How best to arrive at an adequate scheme of protection for the consumer is one of the most difficult problems in business life to-day. It cannot be denied that if the public were asked the plain question: "Do you prefer the pure goods or adulterated ones?" that the decision would be unanimously in favor of the pure ones, even among those who are supposed to be quite satisfied with anything which is sent them. Yet it is almost useless for conscientious manufacturers to determine to issue only pure goods. This for two reasons: First, they are not believed when they say they are taking this high stand; secondly, it is impossible for them to sell their goods at the prices which pure goods would demand.

That they should meet with difficulties of this nature in attempting to place a first-class article on the market is very unfortunate. On the other hand it is a matter of some satisfaction to know that the buying public are becoming aware of the extent to which this deception has been practised upon them in the past. Their gradual enlightenment must be attributed in a large measure to the enforcement of the present Act, so that some good is at least being accomplished, but the ultimate solution of the difficulty seems to be still somewhat remote.

SCIENTIFIC NOTES.

Various Uses of Paper.

At Savinoroska, in Russia, is a paper house. It has been entirely built of blocks of papier maché, even the foundations and roof being made from that material. So, too, are the chimneys, although the paper used in their construction was first mingled with a fireproof material. The house will, in the opinion of its architect, outlast such as are built of stone and brick.

In certain towns of Russia the experiment is now being made of utilizing paper for paving the roads and streets. In this case, also, blocks compressed to great solidity are employed, and are said to stand excellently the wear and tear of traffic. The cost, however, is at present too great to permit of anything like their universal adoption. For courtyards of mansions and similar purposes, where expenses need not be of much consideration, paper pavement, it is averred, will soon come into vogue.

The late Henry Krupp completed, a few months before his death, a number of paper field pieces. These unique guns, which were made to the order of the German Government, are intended for the exclusive use of the infantry. Their calibre is very small, being less than two inches, and so light are they that a single soldier can, unaided, shoulder one with ease. Despite their small weight, however, the resistance is greater than that of a steel field piece of the same calibre.

Germany, too, can boast itself the pioneer in a dental novelty, viz., in paper teeth, which are constructed from paper pulp instead of from the porcelain or other material usually employed. They are said to have given satisfaction to such as have ventured on their use, for not only do they keep their color well, but, not being brittle, are much less liable to chip than the ordinary false teeth. They are likewise guaranteed to be very durable.—*London Tit Bits.*

Canadian Wins Rumford Medal.

To Dr. S. Rutherford, Professor of Physics at McGill University, belongs the proud distinction of being the first Canadian, as well as the youngest man ever to win the Rumford Medal. This medal is awarded once every second year by the Royal Society of Great Britain to the author of the most important discovery or useful improvement made known in Europe on heat or on light, the preference always being given to such discoveries as tend most to promote the good of mankind. Dr. Rutherford's researches were in the field of radio-activity.

It will be a matter of the greatest satisfaction to Canadians generally to know that this much-coveted prize has been brought home to our country, and by one so well able to hold his own among the distinguished recipients of this honor in the past.

Automatic Brake.

Railroad accidents have of late years occurred with such shocking frequency and have resulted in such deplorable loss of life that more than usual interest will be taken by the travelling public in the invention recently put to a practical test on the Niagara, St. Catharines and Toronto Railway. The inventor, Mr. James Doyle, United States Customs officer at Niagara Falls, has aimed to prevent accidents due to the carelessness of engineers, and to produce a device which would automatically ensure the observance of all set signals. Instances are by no means unknown of engineers falling asleep at their posts, or being found dead at the throttle, and it was with a view to obviate the possibility of accidents arising from causes of this nature that Mr. Doyle has been conducting his experiments. The result of his efforts is a brake which can be attached to the side of a locomotive. Beside the railway track, and between it and the semaphore, is placed a small machine called the brake trip, which strikes a projection on the passing locomotive in such a manner as instantly to set the brake. The brake opens the air valve and shuts off the steam, bringing the train quickly to a standstill. The trip works automatically with the semaphore, and will strike the projection only when the semaphore is down, or closed. If the semaphore be up, or open, the trip does not touch the brake, and the train rushes by unimpeded.

The tests were conducted in the presence of a large number of practical railroad men, and are said to have been eminently successful. In every instance the rapidly moving train was stopped in not more than six car lengths. Obstructions of sand or gravel on a level with the trip failed to produce any effect upon the brake, showing that no disadvantages would follow its use in the winter time when the tracks are blocked with snow and ice.

That the appliance should have worked so successfully on its initial trial speaks well for the correctness of the principles upon which it is based. The simplicity of its construction makes it a wonder that the idea was never worked out before. Further experimenting will doubtless result in the improvement of minor details, and as the cost is comparatively trifling, there is a reasonable hope that the device will come into general use.

FOR SALE

A First-class 3-Roller Calender, made for Silks.

Two Paper Rolls, Special Quality, with Steel Axles—66 in. wide 20 in. diameter.

One Steel Roll, 66 in. wide, 11 in. diameter. Steam heated.

All exactly and truly turned. Pressure on Rolls by Screws and Double Levers; Weights for Regulating Pressure removable by mechanism by one hand; Winding-off and Feeding Attachments; Belt Driven; Fast and Loose Pulleys. Is suitable for Calendering any class of textile fabrics, and will be sold cheap for cash.

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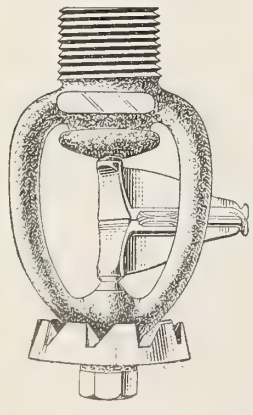
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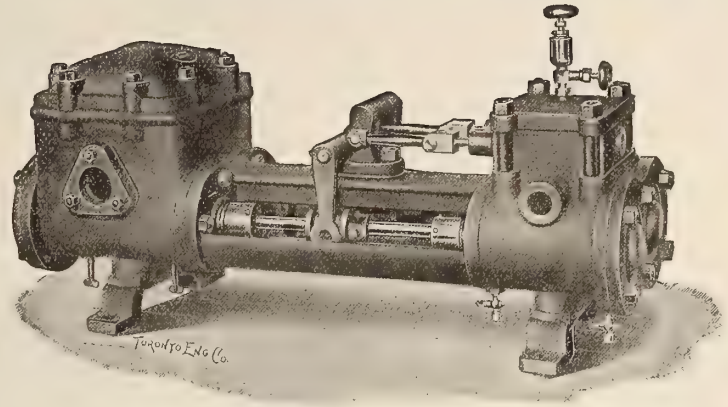
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Do you ever receive enquiries from abroad, written in French, German, Spanish, or some other language? If so, why not reply in the same tongue? You stand far more chance of doing business if you make yourself perfectly intelligible to the foreigner.

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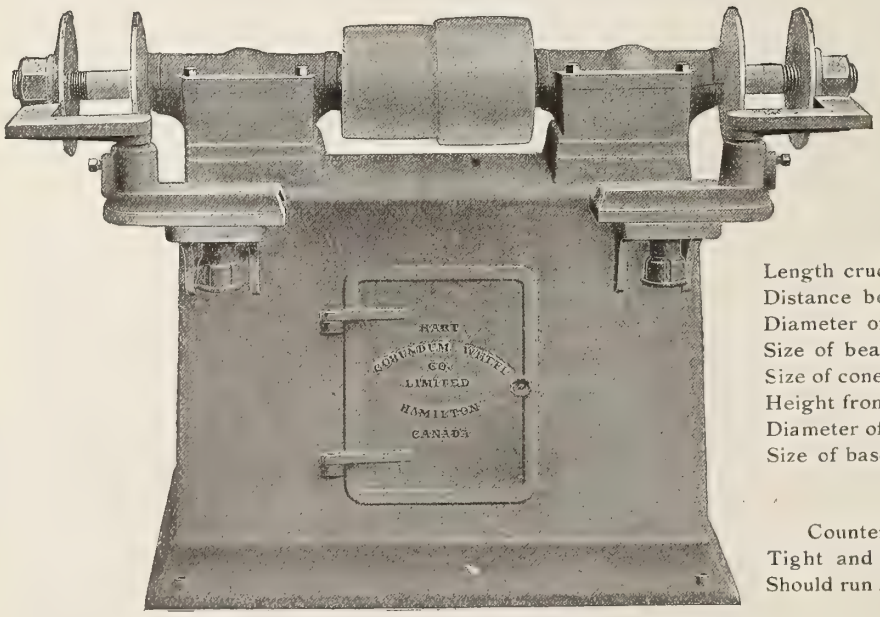
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Bearings absolutely DUST PROOF. Automatic Oilers.

To carry 2 wheels 20 to 30 in. dia., 4 in. thick.

Length crucible steel arbor	57 inches
Distance between wheels	45 "
Diameter of arbor between collars	2 "
Size of bearings	12 x 2 1/16 "
Size of cone pulley on arbor	8 and 9 x 6 1/2 "
Height from floor to centre of arbor	34 "
Diameter of collar	10 "
Size of base	31 x 41 "

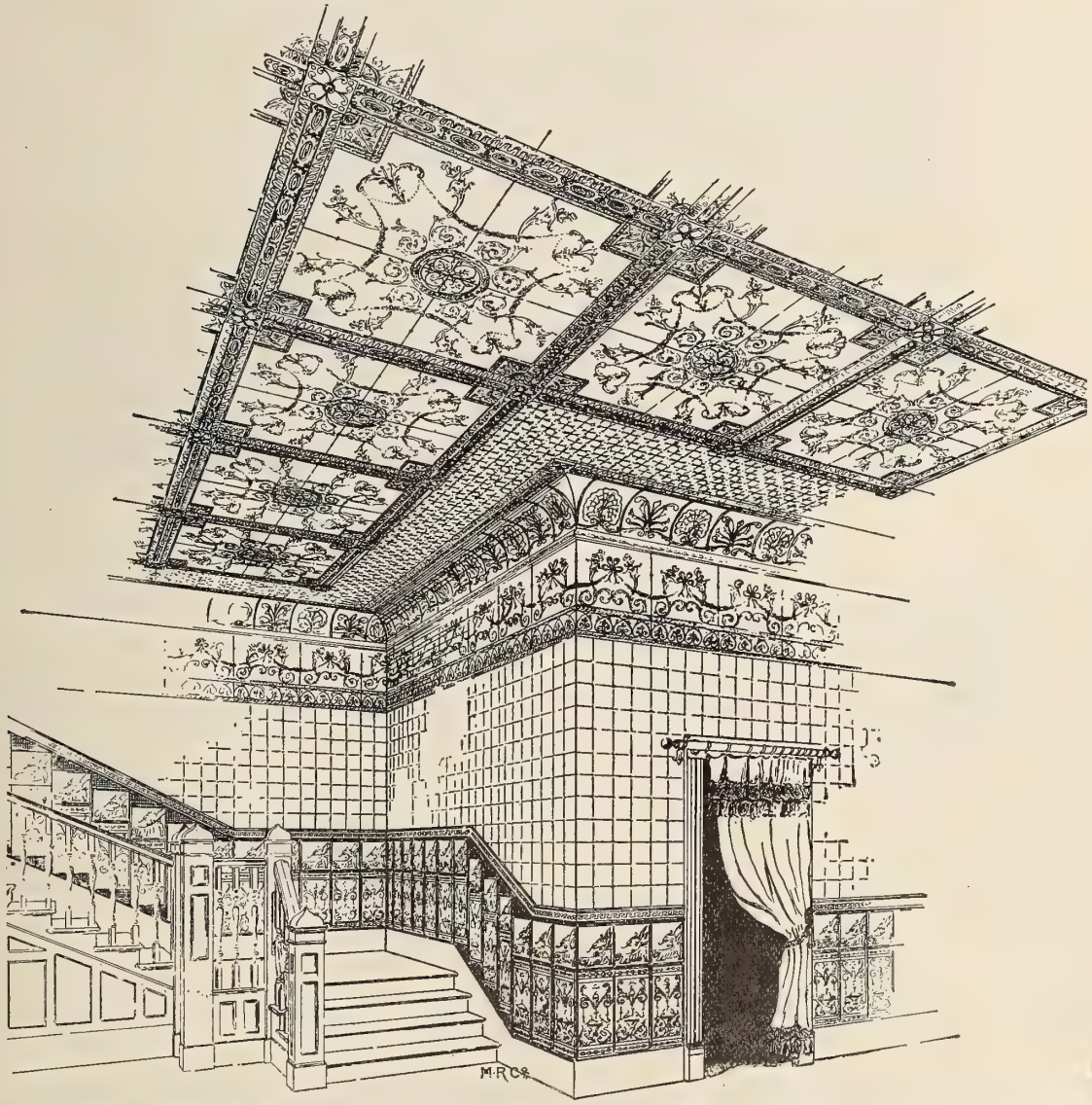
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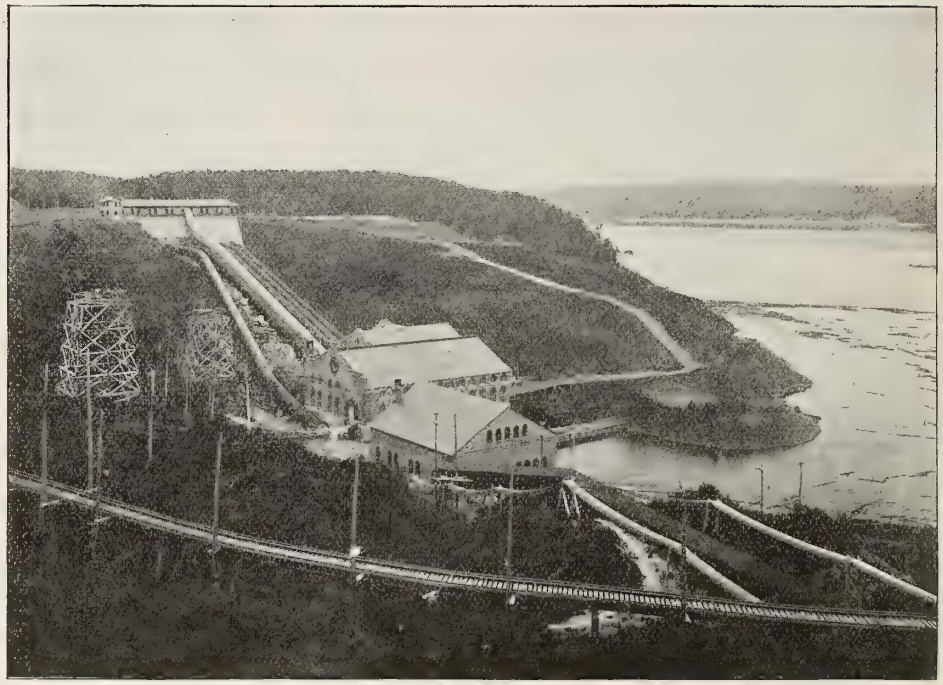
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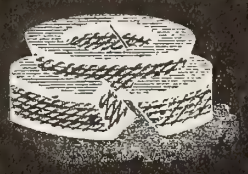
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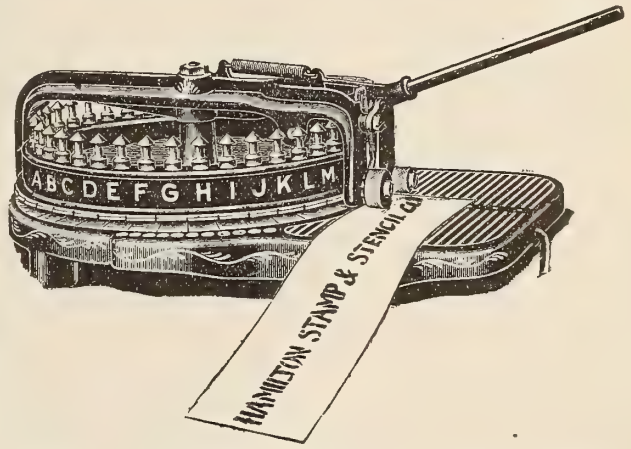
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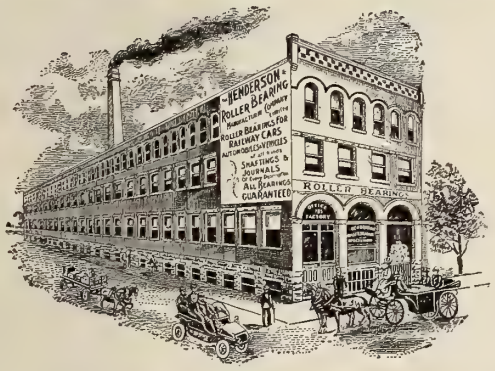
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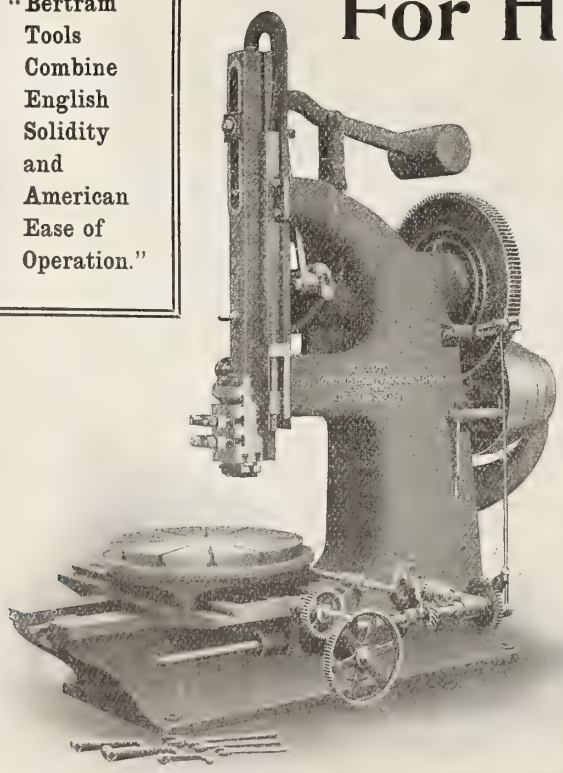
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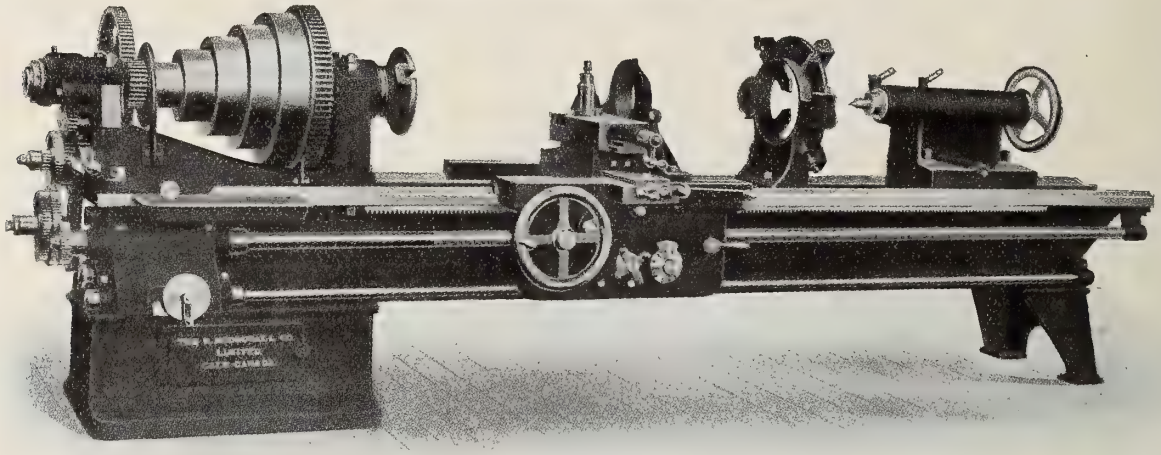
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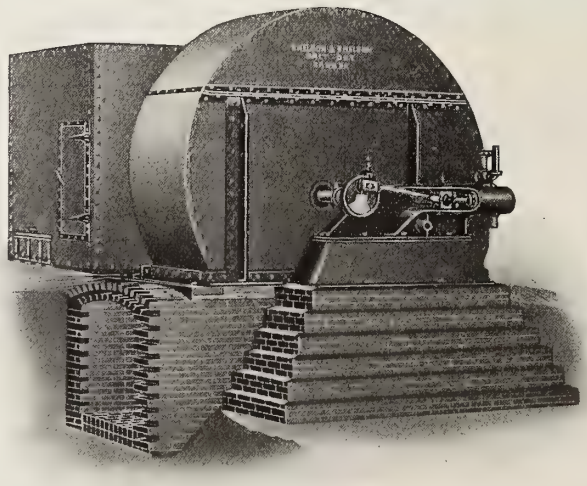
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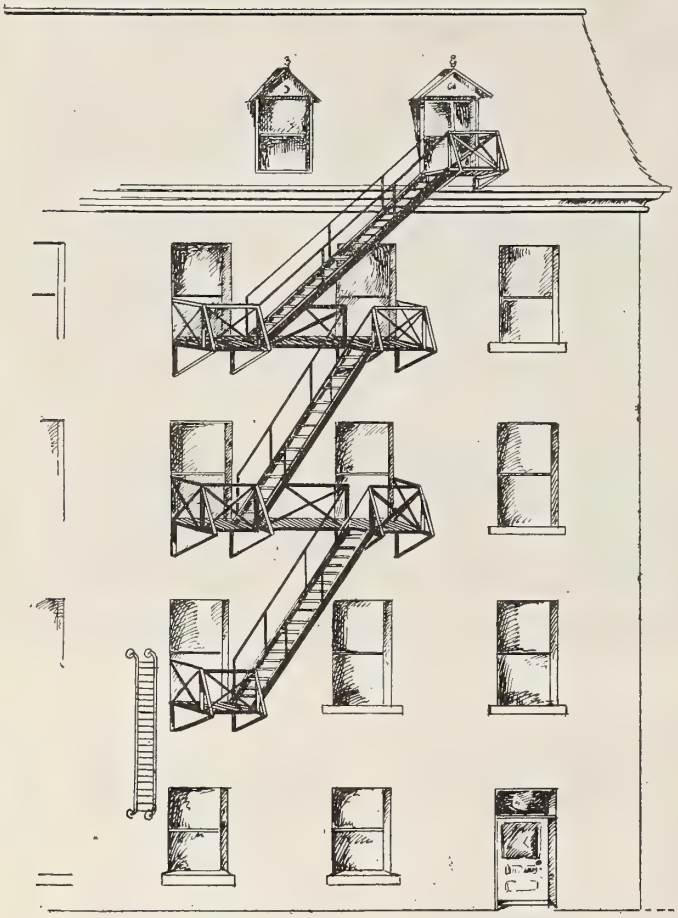
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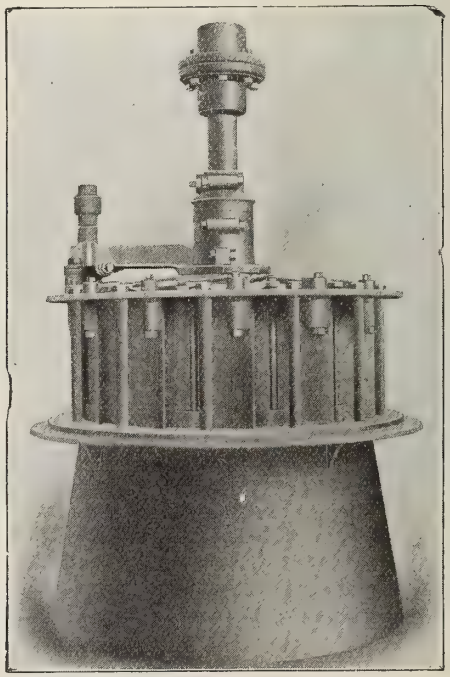
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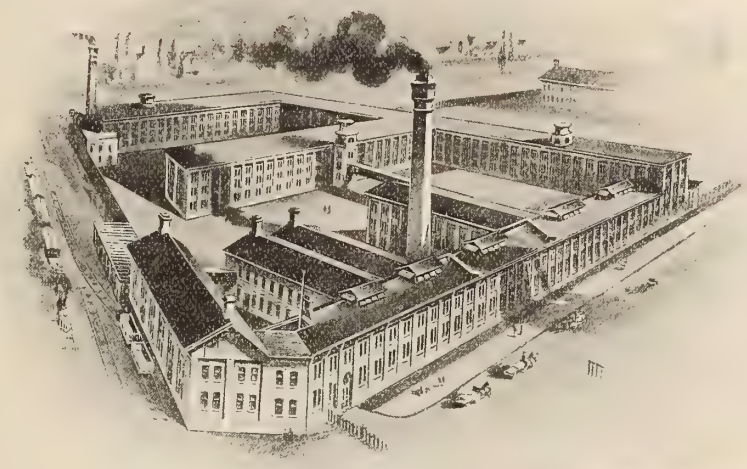


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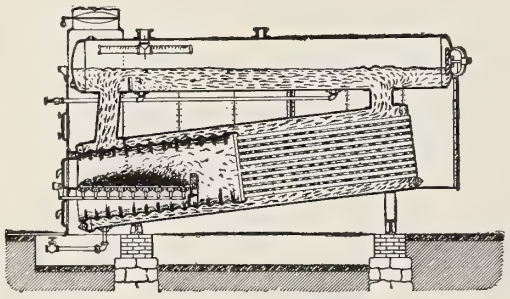
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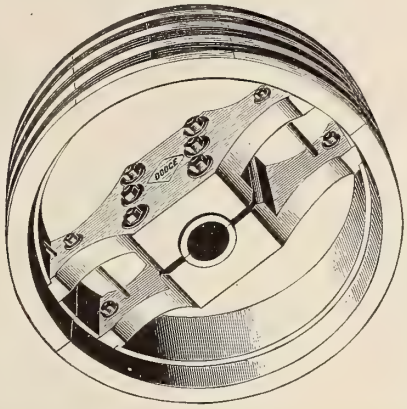
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JANUARY, 1905

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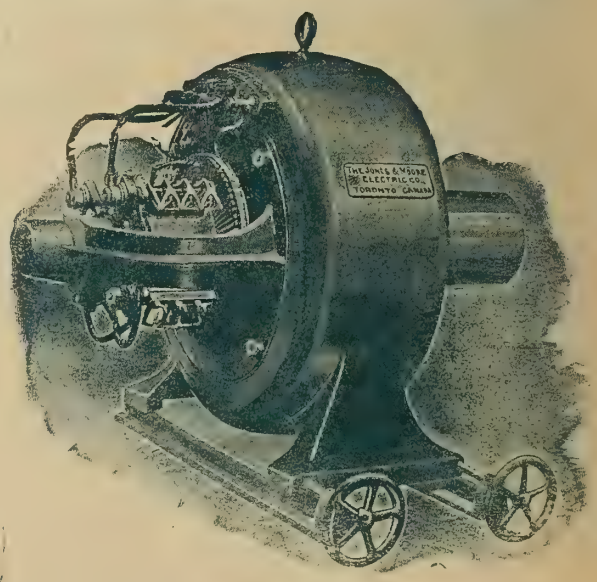
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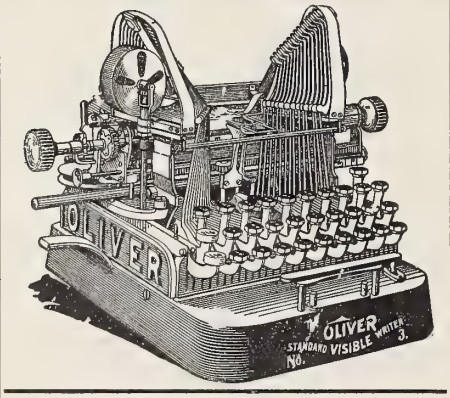
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Vol. V. TORONTO, JANUARY, 1905. No. 6

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association, and devoted to the advancement of the commercial prosperity of Canada.

INDUSTRIAL CANADA circulates to

1. All Members of the Canadian Manufacturers' Association.
2. The British Consuls, the world over.
3. Chambers of Commerce in the United Kingdom.
4. Foreign and home exchanges.
5. Miscellaneous subscribers at home and abroad.

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"SECRETARY," Canadian Manufacturers' Association,
(Incorporated)
Head Office, Toronto, Canada.

WINNIPEG AND RECIPROCITY.

EXCEPTING Toronto, no city in Canada has greater reason to fear reciprocity with the United States than Winnipeg. If there were no tariff restrictions between Canada and the United States the whole Canadian North-West would become tributary to St. Paul and Minneapolis. Those cities already have very good railway connection with the Canadian West, and under the stimulus of unrestricted reciprocity the railway system of the North-West would centre in St. Paul and Minneapolis. Winnipeg could have little hope of inducing capitalists to establish manufacturing industries there if the great manufacturing concerns of St. Paul and Minneapolis could send goods freely into the Canadian West.

It is a well established fact in commercial economy that an old, populous and wealthy city where capital is concentrated and great industries established has an advantage over a younger city even if their natural advantages are equal. In the old days of the Red River Settlement St. Paul and Minneapolis did a considerable business in what is now the Canadian North-West. If there had never been a tariff wall between the two countries much of the trade that has built up Winnipeg would have gone to enrich the manufacturers and merchants of the Minnesota cities.

Winnipeg's future greatness as a milling, manufacturing and railway centre depends upon the maintenance of protection. Any weakening of the protective tariff will help the twin cities of Minnesota to take trade from Winnipeg. Any strengthening of the tariff will make it easier for Winnipeg to hold its position as the metropolis of the Canadian North-West. It is not surprising that a strong feeling in favor of reciprocity is developing in St. Paul and Minneapolis. The wheat growing territory north of the Canadian boundary line is far greater than that south of the boundary. That this immense territory will be rapidly taken up by settlers is now certain. Each year the exodus from the United States to Canada will increase. If the tariff is made as effectively protective as that of the United States all these settlers will become tributary to Winnipeg, and the capital of Manitoba will become one of the greatest cities of the world, but if the protection is removed instead of being strengthened, Winnipeg must play second fiddle to its American rivals.

MR. CHAMBERLAIN WRITES TO MR. McNAUGHT.

THE Canadian Manufacturers' Association has frequently been charged with insincerity in advocating Imperial Preferential Trade while at the same time insisting that the minimum tariff shall afford adequate protection to Canadian industries. It has been alleged that the Canadian manufacturers were deceiving the British people and holding out false hopes of a lower Canadian tariff. There has never been the slightest foundation for the charge of deception. The attitude of the Canadian manufacturers has been clearly stated from first to last and is well known to British advocates of preferential trade. Briefly summarized their policy is that the development of Canadian home industries should be the chief end of the tariff, but that so far as possible everything that cannot be obtained from Canadian producers should be imported from countries of the British Empire. It is an undoubted fact that the most highly protected countries import enormous quantities of goods, and in spite of protection Canada's imports will increase as the country develops in population and wealth. The policy of the Canadian Manufacturers' Association is to divert into British channels as much as possible of this rapidly developing external trade. The views of Canadian manufacturers were forcibly stated by Mr. W. K. McNaught, chairman of the Tariff Committee of the Canadian Manufacturers' Association, in a letter to Hon. Joseph Chamberlain some months ago. Mr. McNaught said:—

"I can assure you that as a rule the Canadian manufacturers are heartily in sympathy with preferential trade throughout the Empire, and although they are desirous of building up Canada by protecting Canadian industries, even against the mother country, they are also equally desirous of helping British manufacturers by transferring to them as much of our trade as pos-

NOTICES.

Executive Council, Canadian Mannfacturers' Association, regular monthly meeting, Board of Trade Building, Toronto, Thursday, January 19th, at 2 p.m.

Toronto Branch, regular monthly meeting, Board of Trade Building, Toronto, January 12th, at 2 p.m.

Montreal Branch, regular monthly meeting, Board of Trade Building, Montreal, January 12th, at 2.30 p.m.

Nova Scotia Branch, regular monthly meeting, Board of Trade Building, Halifax, January 12th, at 2 p.m.

sible which is now being done by foreign countries. I am satisfied from what I know of Canadian conditions that a Canadian tariff could be framed by experts which would not only protect Canadian industries, but bring about a large increase of trade between Canada and the mother country. In other words, while Canadian manufacturers want to make all the goods they can they prefer that what they cannot make shall be supplied us by our kinsmen in Great Britain rather than the artisans of any foreign nation."

In reply to this Hon. Joseph Chamberlain wrote to Mr. W. K. McNaught as follows:—

"I have noted with great satisfaction the general patriotic spirit in which the manufacturers of Canada have received the proposals for preferential trade, and I entirely agree with them that a tariff can be easily framed which will not interfere with the development of Canadian industries, but will, nevertheless, leave open the way for a great increase of trade between her and the mother country.

"I have never assumed that Canadian loyalty was dictated by interest; but, in the affairs of this world, sentiment, however strong, is none the worse for being associated with mutual advantage. It is impossible in view of the development of other Empires to regard the future without anxiety if the different States of the British Empire are each to stand isolated and apart from the rest; whereas a real union on some line of elastic organization would make the British Empire the strongest and most prosperous in the world."

Thus it will be seen that the policy of the Canadian Manufacturers' Association has been endorsed by Hon. Joseph Chamberlain himself.

MR. SIFTON'S SENSIBLE STATEMENT.

E. W. THOMSON, a well known newspaper man who has been writing a series of articles on Canada for a Boston newspaper reports an interview with Hon. Clifford Sifton, which shows that the Minister of the Interior is beginning to take a very sensible view of the Reciprocity question. Mr. Sifton is reported to have said:—"You suppose our West to be a unit in favor of reciprocity in naturals. It is not so. Certainly, I used to favor such reciprocity. But I am not like some people we both know—I can learn. I do not say that the Canadian West, and myself, might not approve free, or much more free exchange of natural products with the States. It depends on what arrangements could be made for permanency of the arrangement. We could not afford to risk much on a market that might be hastily closed to us. Canadians have not forgotten the lesson of 1866, when Washington abrogated the reciprocity treaty of 1854. This country has got into the way of adapting its production, and very largely its entire business, to the American market. Canada was flattened out for years by the abrogation of the treaty. No more of that for me. We have adapted our production and business to the independent, self-sufficient policy that has been pursued for many years now. Does anybody of good sense imagine we will give that up, and undertake a re-adaptation to the United States market on a bargain extending over any short term, or which could be done away with by a few years' notice from Washington? No."

It is altogether unlikely that the United States Congress would consent to an agreement binding the Republic to any tariff arrangement for a long period. It would be regarded as a surrender of the power of Congress to alter the tariff. Nor would the people of the United States approve of a treaty for permanent reciprocity restricting the rights of future Congresses to deal with the tariff as they may see fit.

But even if the United States could be induced to make such an agreement would the people of Canada like to see this country irrevocably bound to the United States by a permanent reciprocity treaty which could not be abrogated no matter how unfavorable it might prove to be for Canada?

TWO GREAT SPEECHES.

TWO great speeches on the subject of Reciprocity were delivered in Boston recently by Canadians, one before the Canadian Club of that city by Hon. Geo. E. Foster, and the other before the Home Market Club by Hon. W. H. Montague. Hon. Mr. Foster was talking to Canadians but they were Canadians who had left their native country, many of them long ago. They thought of Canada as it was when they left it, not as it is to-day, and consequently most of them believed that reciprocity would be mutually beneficial to Canada and the United States. Mr. Foster eloquently described the great changes that have taken place in Canada in recent years, the consolidation of the scattered provinces into a united and prosperous Dominion, the expansion of territory, the development of manufacturing industries, the growth of national sentiment and optimistic confidence in Canada's future. He pointed out that while there never was in Canada a better and kindlier feeling toward the United States than there is to-day the Canadian people no longer desire reciprocity. "I found when I came here a troubled atmosphere over reciprocity," said Mr. Foster, to those Boston Canadians. "Up in Canada we are very peaceful. Really to speak the truth in a few words that which is absolutely a dead question with us is a live one here."

That is the truth. Reciprocity is a dead issue in Canada and any politician who tries to resurrect the corpse will run the risk of falling into its grave, never to rise again.

It was to a very different audience that Hon. W. H. Montague delivered his address. The Boston Home Market Club is not composed of expatriated Canadians. It is an organization which has done much to advance the cause of protection in the New England States by making the people acquainted with the value of the home market. The members of this club are not very anxious to tamper with the United States protective tariff for the sake of reciprocity with Canada, but Mr. Foss, the secretary of the New England Reciprocity League, has persuaded them that it will be to the advantage of New England industries to admit Canadian coal and Canadian iron ore free of duty. Dr. Montague told them that Canada would never agree to sacrifice her manufacturing industries in order to secure free admission into the United States for her agricultural products and raw materials. "Conditions have changed with us," said Dr. Montague, "for we have established our own industries and we are making manufactured products for our own people. And I want to tell you—and I hope you will visit Canada yourselves and find the truth or the falsity of the statement—that in Canada to-day there is no party of our politicians who advocate reciprocity. There is no agitation for reciprocity, and there is very little desire in any part of our Dominion for reciprocity with the people of the United States."

Mr. Foss, in urging the Boston Home Market Club to favor reciprocity intimated that it meant much more than extended trade for the United States. "You cannot tell what will happen if reciprocity is adopted," said Mr. Foss. Referring to this Dr. Montague said: "If that means political absorption then he is sailing his ships for sunny isles that will never come to view. Canada—and I say it with the heartiness of my heart—is British from core to skin. She believes that her mission can best be performed in and through and by reason of being a part of the British Empire to which she belongs."

It is noteworthy that Dr. Montague's remarks were received with hearty applause. A bold, patriotic utterance by a Canadian speaker always excites admiration rather than resentment in the United States. If the Canadian Government should be bold enough to make our tariff as thoroughly protective as that of the United States our neighbors would be somewhat surprised at the progressiveness of "slow" Jack Canuck, but they would quickly show their appreciation of Canadian common sense by investing many millions of dollars in the development of Canada's natural resources.

THE CANADIAN NAVY.

IT is stated that Hon. Raymond Prefontaine, Minister of Marine, will at the coming session of Parliament introduce a bill to establish a permanent naval force of 800 men and a volunteer force of 3,000. This has furnished occasion for a good deal of newspaper joking about the Canadian navy, but it is a step in the right direction, and it is to be hoped that it may lead to bigger things. Canadians should be ashamed to be entirely dependent upon British generosity for naval protection. The aim of our Government should be to relieve the British people as soon as possible of the cost of protecting Canada which the taxpayers of the United Kingdom have borne so long. It is fortunate that the measure is to be introduced by a French-Canadian Minister of Marine. In the past all proposals that Canada should establish a naval force have been met with the argument that the French-Canadians would not agree to it. This notion having been dissipated by Hon. Mr. Prefontaine we may expect a progressive policy in this regard. But in establishing a Canadian navy we should at the outset insist that all Canadian warships must be built in Canada. Canada should enter upon a vigorous policy of naval shipbuilding. If Canadian Government contracts for warships are assured there will be no difficulty in inducing some of the great British shipbuilders to establish branch shipyards in Canada. The establishment of a Canadian fleet, built, owned, manned and controlled by Canadians will be a big advertisement for Canada. Now all nations look down upon us as colonials dependent upon Britain for protection. When we show the world that we are big enough, strong enough and rich enough to defend ourselves the influx of capital and immigrants will soon repay for any expenditure we may make on the navy.

A MANUFACTURER'S COMPLAINT.

INDUSTRIAL CANADA has pointed out that each Canadian manufacturer should always endeavor in every possible way to help other Canadian manufacturers, by giving them a preference over foreign manufacturers. If every member of the Canadian Manufacturers' Association would make this a rule of business there would be a great development of manufacturing in Canada and the importation of foreign goods would be considerably reduced. A leading Canadian manufacturer has called the attention of INDUSTRIAL CANADA to the fact that a Canadian company manufacturing an article of an altogether different class have secured samples of similar lines to those manufactured by the complainant and are having them carried by their travellers on the road in competition with Canadian goods, the object being to help pay the travelling expenses. The complaining manufacturer says: "Now as Canadian manufacturers how would they like to have us equip our ten travellers with their class of goods made in England or the United States to help out the expenses? If all the leading manufacturers in Canada would get their travellers to talk Canadian goods, and only Canadian goods it certainly would help matters along very materially."

A GOLDEN BURDEN.

REFERRING to a statement in the New York *Journal of Commerce* "that $100,000,000 of American capital has been expatriated and invested in enterprises in Canada as a result of the tariff wall that separates the two countries," the *Toronto Globe* says:—

> "This is advantageous to neither country as it represents a drain from the United States and an unnecessary burden on Canada."

Canadians in general would willingly bear a heavier burden of that kind than they now carry, but the *Toronto Globe* would like our Government to relieve them of it by arranging for Reciprocity with the United States.

"Permit me to relieve you of the burden you carry," said the polite highway robber to the traveller when he took possession of his purse full of gold.

Although a large amount of United States capital has been invested in Canada owing to the existence of tariff walls between the two countries an enormously greater amount of capital would seek investment in this country if the Canadian tariff wall were as high as that of the United States.

Unfortunately the Canadian tariff wall is now so low that the balance of trade against Canada in our dealings with the United States is greater than the amount of United States capital annually invested in Canada. But for the fact that a considerable amount of money has come into Canada for investment the Dominion would have been completely drained of gold to pay for over importations. By increasing the tariff we would put a stop to over importations and at the same time attract a very much larger amount of capital for investment, thus doubly adding to the wealth of the country. This is the kind of burden that the people of Canada will put themselves about to carry.

A FIRE INSURANCE DEPARTMENT OF THE ASSOCIATION.

The Executive Council of the Canadian Manufacturers' Association at its December meeting approved of the recommendation of the Fire Insurance Committee to organize a Fire Insurance Department. The Transportation Department, organized January, 1904, has proven to be of great value to the members of the Association and to shippers generally. The Insurance Department marks another stage in the development of the Association and will be a most important addition to its many lines of usefulness.

The announcement that an Insurance Department would be organized has been received with much approval. Only one objection has been made. Some of the committee were of the opinion that the Association should have proceeded at once to organize an Insurance Company on a mutual basis and carry as much insurance as could be safely taken. This feature was thoroughly discussed but the final decision was that the organization of the department would be a step in advance and, at a later date, would make the organization of a company much easier if it was deemed advisable to proceed.

The Insurance Committee will appoint at once the best man obtainable to the position of Insurance Manager, and the work of the department will begin without delay.

The different features of insurance to be dealt with will be outlined at an early date. It is, however, understood that the manager will be available at all times to consult with the members of the Association and advise them regarding their policies and their rates. A system of inspection will be organized and suggestions offered for improving risks that will bring in return a reduction in premiums. The department will eventually undertake to handle all the insurance the members entrust to it and to secure policies at the best possible rates of premium. Responsible companies have made offers to accept insurance from the Association at a percentage of discount off the present rates. This discount will be disbursed to maintain the department and to benefit the members of the Association by reducing their premiums.

The Insurance Committee have started out by realizing that they can best benefit the Association's members by proceeding slowly and by putting the Department on a solid basis at its inception.

THE SOUTHERN STATES AND PROTECTION.

IN the recent presidential election while the Northern States gave an overwhelming majority for the party of high protection the South went almost solidly Democratic, but this was due to the fact that the voting population of the South, which is largely white, regards the Republican party as favorable to negro equality with the whites and Roosevelt's marked friendliness for Booker Washington and other prominent negroes intensified the distrust of Southern whites. The Baltimore Manufacturers' *Record* thinks the Southern States now favor protection although they were formerly opposed to it. The *Record* says: "If in some campaign all other questions could be eliminated except that of free trade or protection this country would register such a vote for protection as no party ever received."

Executive Council

DECEMBER MEETING

Arrangements for the Excursion to Great Britain—Inauguration of the Insurance Department—Resignation of Mr. W. H. D. Miller—British Columbia Lumber Question.

The regular monthly meeting of the Executive Council, Canadian Manufacturers' Association, was held in the Council Chamber, Board of Trade Building, on Thursday, December 15th, 1904, at 2 p.m.

The meeting was one of the largest and most representative which has ever been held, representative officers being present from the extreme eastern and western provinces of the Dominion.

Mr. W. K. George, the President of the Association, occupied the chair and the following other members were in attendance:—Messrs. Geo. E. Amyot, Quebec; C. C. Ballantyne, Montreal; Geo. Booth, Toronto; P. H. Burton, Toronto; C. N. Candee, Toronto; H. Cockshutt, Brantford; John W. Cowan, Toronto; Robt. Crean, Toronto; Richard A. Donald, Toronto; L. V. Dusseau, Toronto; P. W. Ellis, Toronto; H. W. Fleury, Aurora; Geo. D. Forbes, Hespeler; W. M. Garthshore, London; Lloyd Harris, Brantford; John Hendry, Vancouver; R. Hobson, Hamilton; M. Kennedy, Owen Sound; R. O. McCulloch, Galt; John S. McKinnon, Toronto; R. McLaughlin, Oshawa; P. McMichael, Toronto; W. K. McNaught, Toronto; Jas. P. Murray, Toronto; Carl Riordan, Merritton; D. W. Robb, Amherst; J. D. Rolland, Montreal; J. R. Shaw, Toronto; J. T. Sheridan, Toronto; Wm. Stone, Toronto; John M. Taylor, Guelph; J. O. Thorn, Toronto; R. L. Torrance, Guelph; C. R. H. Warnock, Galt; C. H. Waterous, Brantford; Arthur W. White, London; R. C. Wilkins, Montreal; Henry Wright, Toronto.

In opening the meeting the President expressed his pleasure at seeing so large a representation.

Minutes of the previous meeting as published in the last issue of INDUSTRIAL CANADA were approved.

Regrets at being unable to attend were received from the following members:—Messrs. Geo. E. Drummond, G. A. Vandry, D. L. McGibbon, J. T. R. Laurendeau, S. W. Ewing, C. Turnbull, W. B. Tindall, A. S. Rogers.

Reports of the Officers and Committees of the Association were then received as follows, and were regularly adopted:—

Secretary.

The Secretary reported briefly regarding the recent convention of the Citizens' Industrial Association, an account of which appears elsewhere in this issue.

Treasurer.

The report of the Treasurer was presented by Mr. Geo. Booth. It showed the standing of the Association's general funds and also of its various departments up to November 30th.

Reception and Membership.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. R. Crean. It recommended the acceptance of twenty-six applications for membership, the names of which appear in another column. It also announced the receipt of an invitation addressed by the London Chamber of Commerce through its Secretary to the members of this Association asking them to visit Great Britain next year, and outlining briefly an itinerary which provided for a reception in London, and visits to important centres of the largest British industries. The letter stated that the London Chamber were desirous of making the excursion a great success and invited suggestions from the Committee.

Following the report of the Committee the Secretary reported the result of an interview held by the President of the Association and himself with the Allan Steamship Company in Montreal at the request of the Reception and Membership Committee. The report stated that, subject to the approval of the Executive Council, an option had been obtained on the entire first-class passenger accommodation of the new triple screw turbine S. S. "Victorian" for her June sailing, 1905. After dealing with the merits of the steamship the report stated that the rates secured ranged from $135 upwards for the round trip, with the privilege of returning at any time during the year upon any of the Allan Steamships to Montreal or upon any of the Cunard Steamships to New York. A report was to be made to the Steamship Company on or before the 1st of February next, stating how many passengers desired accommodation and making a deposit of $25 per passenger, the balance of the passage money being payable three weeks before the sailing of the vessel.

After reading the report it was moved by Mr. P. H. Burton, seconded by Mr. R. C. Wilkins, that the report be received and the project as outlined be approved with such modifications as may seem to the Reception and Membership Committee of the Association to be necessary. Carried.

A number of the members of the Executive Council expressed their views on the subject. The President pointed out the importance of the project and the advantages which would undoubtedly accrue to the Association and to the Dominion of Canada from the visit to Great Britain of a representative body of Canadian business men.

Messrs. J. O. Thorn and J. P. Murray expressed the view that the Executive Council should move cautiously, and that in any decision reached the general work of the Association should not be detrimentally affected.

Mr. D. W. Robb supplied some valuable hints regarding the Excursion.

Finance Committee.

The report of the Finance Committee was presented by Mr. J. O. Thorn. It provided for the regular monthly expenses and recommended the payment of $1,000 to the Dominion Atlantic Railway Company in full settlement of their claims against the Association. As stated to the Executive Council at its last meeting this amount will be returned to the general funds of the Association.

Railway and Transportation.

The report of the Railway and Transportation Committee was presented by the Chairman, Mr. H. Cockshutt. This report which appears in another column closed with the announcement of the resignation of Mr. W. H. D. Miller, Manager of the Transportation Department. In making the announcement, Mr. Cockshutt referred in the highest terms to Mr. Miller's work. He had inaugurated the work of the department and during the year which he held office any doubt as to its value and necessity had been removed. His work had been performed not only with efficiency, but with great success, and his departure from office was a distinct loss to the Association. The report further recommended the acceptance of Mr. Miller's resignation and requested for the Committee the authority to appoint his successor.

In seconding the report Mr. J. O. Thorn testified to the excellence of Mr. Miller's services. The President also assured Mr. Miller of the general regret of the members of the Executive Council at his departure. Mr. Miller returned his thanks to the Association for the kindness shown him during his term of office and assured the Association that he would follow the work of its Transportation Department with deep interest.

Commercial Intelligence.

The report of the Commercial Intelligence Committee, was, in the absence of the Chairman, Mr. A. S. Rogers, presented by

the Secretary. This report is also published in another column.

Mr. P. W. Ellis suggested that the members of the Executive should advise the Committee of any changes in the arrangements of the Trade and Navigation returns which they thought desirable. This suggestion was referred to the Committee for action at their meeting.

Fire Insurance.

The Chairman of the new Fire Insurance Committee, Mr. P. H. Burton, called upon Mr. J. F. M. Stewart, acting Secretary of the Committee, to read the report which had been presented upon the insurance situation at the first meeting of the Insurance Committee on the 14th inst. The report dealt with the conditions leading up to the present unsatisfactory situation and showed the various courses open to the Association.

Following this the Chairman presented the report adopted by the Committee, which concluded by providing—

"That this Association inaugurate an Insurance Department and appoint an insurance expert for the purpose of procuring insurance for its members, the services of the department to be available for such matters as improvements of risks, and all matters pertaining to insurance; and that the Finance Committee be asked to take into consideration ways and means."

This report was made the subject of discussion, the following gentlemen taking part:—Messrs. R. C. Wilkins, P. W. Ellis, D. W. Robb, H. W. Fleury, J. P. Murray, J. W. Cowan, and C. C. Ballantyne.

The report was finally adopted.

Branches.

The report of the Montreal Branch was presented by the Hon. J. D. Rolland and that of the Toronto Branch was, owing to the length of the meeting taken as read. Both of these reports were received and both are published elsewhere in this issue.

Before the meeting adjourned, Mr. John Hendry, the Vice-President for British Columbia, placed before the members the extremely unsatisfactory state of the lumber industry in his province. A number of the mills had shut down under the increasing importations, and the industry was generally depressed. He asked the support of the Association in presenting the case to the Government. On motion of Mr. Thorn, seconded by Mr. Dusseau, the matter was referred to the Tariff Committee for their special consideration.

Mr. D. W. Robb, Vice-President for the Province of Nova Scotia, expressed his pleasure at being present at the meeting, and reported that the Nova Scotia Branch was in a flourishing condition. The members of the Association in the Maritime Provinces were heartily in sympathy with the work of the organization and, though separated from the head office by a great distance, might be depended upon for their support.

Mr. Geo. E. Amyot, the Vice-President for the Province of Quebec, closed the meeting with a hearty invitation to hold the next Convention in the City of Quebec. This matter, the President stated, was now under favorable consideration, and the invitation of our Quebec members would in all probability be accepted although no definite decision had yet been reached.

RAILWAY AND TRANSPORTATION COMMITTEE.

The report of the Railway and Transportation Committee, as submitted to the Executive Council, dealt with the following questions:

Railway Passenger Fares.

Some complaint has arisen about the maximum tariffs published in the *Canada Gazette*. The Transportation Committee has been giving consideration to this matter. If there is any disposition to increase the passenger fares over and above those charged immediately prior to the taking effect of the present Railway Act, the matter will be taken up vigorously.

The rules and conditions of carriage printed in the railway companies' forms of bills of lading were further considered.

New Zealand Service of the Canadian-Australian Line.

The Association was urged to lend its assistance in securing an alteration in the route of this line, cutting out Brisbane, Queensland, and substituting therefor some port in New Zealand. The Committee, while feeling that perhaps a change might be desirable, could not see its way to expressing an opinion until supplied with some tangible reason for the change. In the meantime, it re-affirms the opinion previously expressed, that a service from the Atlantic coast to New Zealand is highly desirable.

Demurrage and the West Indian service were considered; also interchange switching at important industrial centres, upon all of which matters the department is now taking action.

The changes in the flour and grain rates of the railways were referred to at length. The railways advanced the rates from Ontario into the Maritime Provinces, without giving the full notice required by the Act of their intention to do so. This matter is referred to in another column.

The Committee expressed regret to announce the resignation of Mr. W. H. D. Miller, the Manager of the Department. This step on the part of Mr. Miller is due to his acceptance of an important position offered to him by a large Canadian manufacturing institution. The Committee, with great regret, recommended the acceptance of his resignation, and expressed the wish of all the members in extending to Mr. Miller sincere congratulations and best wishes for his success.

The Executive Council was requested to grant the Committee power to appoint a successor.

COMMERCIAL INTELLIGENCE COMMITTEE.

Your Commercial Intelligence Committee begs to report as follows:—

The regular monthly meeting was held on the 8th inst., and was well attended. The following important matters came before the Committee:—

1. Communications were received from

(*a*) The Dominion Government officers in London asking permission on behalf of Perry's Commercial Agency to publish in their list the names of members of the Association. This permission was granted.

(*b*) The Philadelphia Commercial Museum with reference to the class of reports received from their correspondents in Europe, and expressing the opinion that the Association would be satisfied with the work of the agents which they had recommended.

(*c*) From prospective correspondent members in Amsterdam, Smyrna, Cairo and Tokyo. These replies, with one exception, were favorable to the proposition made by the Association. They were held over until the next month, when your Committee will report the entire progress made on the system up till that time.

(*d*) From Mr. J. P. Murray, suggesting that the members of the Association should be consulted as to whether any changes were desired in the arrangement of the Government returns on Trade and Navigation, in order to make the statistics more useful. A number of suggestions were made by the members of the Committee, but it was decided that before taking action the Committee should discuss the matter more fully at its next meeting.

(*e*) From Mr. E. Johnson, Secretary of the Decimal Association of Great Britain, requesting the publication of a letter regarding the Association's attitude on the Metric System in the next issue of INDUSTRIAL CANADA. The letter was read and Mr. Johnson's request acceded to.

2. The secretary reported upon the suggestion made at a previous meeting, that under the direction of this Committee regular reports should be published in INDUSTRIAL CANADA, showing the

importation of manufactured goods by items. He stated that after consultation with the Chairman they had agreed that the publication of such a statement would require not less than three pages, and their joint recommendation was that it should be issued quarterly as a supplement to INDUSTRIAL CANADA. Your Committee adopted the recommendation and the Secretary was directed to forward it to the Industrial Canada Committee for their consideration.

3. A report was presented upon the present method of the Post Office Department dealing with unstamped letters. The report concluded that while the present system was not perfect, yet it was, perhaps, more satisfactory than any other suggested. The Committee coincided in this conclusion.

Your Committee then considered the appointment of a Special Committee to investigate and report upon the subject of Technical Education and the possibility of establishing a standard national system under the control of the Dominion Government. After careful consideration the following nominations, nine in number, were made:—

Alfred Burton, Merchants' Dyeing and Finishing Co.

H. Van der Linde, Gutta Percha and Rubber Manufacturing Company.

J. P. Murray, Toronto Carpet Manufacturing Co.

Gerhard Heintzman, Gerhard Heintzman, Limited.

Thos. Findley, Massey-Harris Co., Limited.

Frank A. Rolph, Rolph & Clark, Limited.

W. A. Johnson, United Electric Co., Limited.

S. M. Wickett, Wickett & Craig, Limited.

Chas. Morrison, Jas. Morrison Brass Manufacturing Co.

In recommending that the Committee should be chosen from this number your Committee added their opinion that the Dominion control of the subject may be shown to be ultra vires in view of the provisions of the British North America Act, and this important feature was recommended as the first consideration for the new Committee.

All of which is respectfully submitted.

A. S. ROGERS,
Chairman.

MONTREAL BRANCH.

The regular monthly meeting of the Executive Committee of the Montreal Branch of the Canadian Manufacturers' Association was held on December 9th, with the Montreal Chairman, Mr. J. J. McGill, presiding. There were also present Messrs. S. W. Ewing, C. C. Ballantyne, Hon. J. D. Rolland, J. S. N. Dougall, D. Williamson and Robt. Gardner.

The Hon. J. D. Rolland, Chairman of the Legislative Committee, reported progress upon the movement to have the electric motor tax abolished.

The Chairman reported upon the conference held with Mr. R. S. White, Collector of Customs and J. S. Patch, General Agent of the Canadian Express Co., with reference to the delay in securing express parcels from the customs. The committee expressed its pleasure at the willingness of the collector to adopt new measures that will remove the delay, and decided to continue the agitation with the Express Company until some remedial measures were effected. The members are requested to refer their individual grievances to the Secretary.

Legislation.

The committee had under consideration the different questions being studied by the Parliamentary Committee. It was decided to defer the consideration of Government control of telephone and telegraph services in Canada. It was also unanimously recommended that the Parliamentary Committee should try to secure amendments to the Ontario Extra-Provincial Act, whereby it would exempt companies incorporated under Dominion Charter, and also companies incorporated by a charter obtained in provinces that do not levy a similar tax upon companies incorporated in the Province of Ontario.

The committee was pleased to learn that some action would be taken toward the securing of franchise rights for incorporated companies. Incorporated companies have no franchise in the Province of Quebec.

By-Law Re Explosives.

There was also upon the table a by-law now before the City Council having for its purpose the regulation of the manufacture, storage, use, and transport of explosives and other highly combustible materials within the City of Montreal. It was decided to oppose certain features of this by-law, and it was referred to the Legislation Committee.

It was decided to hold an informal gathering of the members of the Montreal Branch some time during the month of January; this gathering will likely take the form of a "Smoker." The following sub-committee was appointed to arrange for the function:—J. J. McGill, D. Williamson, Robt. Gardner, S. W. Ewing.

The Finance Committee presented its report through the Chairman, Mr. J. S. N. Dougall, and recommended the re-engagement of the Secretary for the ensuing year, which was approved by the committee.

Five applications for membership were passed.

Oil, Paint and Varnish Section.

On December 5th the Montreal Linseed Oil, White Lead, Paint and Varnish Section of the Canadian Manufacturers' Association was formed with the following officers:—Chairman, Robt. Munro; Vice-Chairman, E. Liersch; Secretary, E. H. Cooper; Executive Committee, A. Ramsay, H. P. Livingston, and J. S. N. Dougall. It has been recommended also that a similar section should be formed in the city of Toronto, and that these two sections should co-operate upon national matters.

TORONTO BRANCH.

The regular meeting of the Executive Committee of the Toronto Branch was held December 15, 1904.

There were present Messrs. W. B. Tindall, J. O. Thorn, J. S. McKinnon, John Northway, C. N. Candee, A. S. Rogers, Jas. P. Murray, W. P. Gundy, W. K. George, Geo. C. Gale, Ed. J. Freyseng, S. R. Hart, P. H. Burton and Robt. Crean.

In the absence of the Chairman, who was unwell, Mr. W. B. Tindall, Vice-Chairman, presided.

Seven applications for membership were recommended for acceptance. The names of these appear in another column.

Fire Protection By-Law.

The Secretary was instructed to have a poster printed for distribution generally in all parts of the city urging the property owners to vote in favor of the By-law which provides for the expenditure of $750,000 for improved fire protection.

Traders' Week in Toronto.

The Executive approved of a plan suggested by the Toronto Board of Trade to arrange for a Traders' Week in Toronto in the early spring along the lines of the Traders' Week held at different times in New York and Chicago. The Committee that had already been acting with the Toronto Board of Trade was continued in office and asked to lend their assistance.

Toronto Exhibition.

A By-law to be submitted to the property owners authorizing the City Council to expend $300,000 in permanent improvements for the Exhibition was considered and a strong resolution passed favoring the same.

Section Luncheons.

A report was made regarding the Section Luncheons now being held in Toronto. The report stated that the first luncheon had been held and was very successful. It was decided that a branch dinner should be held in Toronto about the end of January.

Other matters dealt with were the Smoke By-law and the Telephone Service.

NEW MEMBERS

Passed by Executive Council, December 15th, 1904.

Brockville, Ont.

G. T. Fulford & Co.—Patent Medicines.

Halifax, N.S.

J. A. Dunn.—Electric Fittings.
The Halifax Herald.—Newspapers.
Levi Hart & Son, Limited.—Flour and Meals.
Levi Hart & Son, Limited.—(I. B. Shaffner, 2nd Member).
Moirs, Limited.—Biscuits.
Moirs, Limited.—(J. P. Cox, 2nd Member).

Montreal, Que.

Bode's Gum Co.—Chewing Gum and Confectionery.
Canadian Aluminum Works, Limited.—Aluminum Goods of all sorts.
The Canadian Rubber Co., of Montreal.—(E. A. Wright, 3rd Member).
The Standard Photo Engraving Co., Limited.—(Fred. W. Heath, 2nd Member).

Picton, Ont.

The Old Homestead Canning Co.—Canned Fruits and Vegetables.

Quebec, Que.

Elzear Lessard.—Fur Coats and Sleigh Robes.

Seaforth, Ont.

Seaforth Milling Co.—Flour.

Toronto, Ont.

Arlington Manufacturing Co., Limited.—Waterproof lars and Cuffs.
Canada Paint Co., Limited.—(S. F. McKinnon, 2nd M ber).
The Carbon Paper Manufacturing Co.—Carbon Pa and Typewriter Ribbons.
The Conger Lumber Co., Limited.—Lumber.
Dalton Bros.—Spice.
Rhys D. Fairbairn, Limited.—Fancy Dry Goods.
The Keens Manufacturing Co.—Whitewear and Blous
Napoli Macaroni Co.—Macaroni.
The Ontario Rubber Co.—Rubber Goods.
The Reliance Knitting Co., Limited.—Sweaters, Jackets, Toques.

Walkerville, Ont.

The McGregor, Banwell Fence Co., Limited.—Woven W Fencing and Gates.

Winnipeg, Man,

The Cement Building Block Co., Limited.—Cement Bu ing Blocks and Machinery.

BRITAIN'S WOOLLEN INDUSTRY

Reasons for British Superiority Interestingly Discussed by Mr. J. B. Jackson—Important Part Played by Technical Education—Ruinous Effect of the Tariff on Canadian Woollen Mills.

The following extracts are taken from a report upon the woollen industry in Great Britain made recently to the Canadian Department of Trade and Commerce by Mr. J. B. Jackson, Canadian Commercial Agent, in Leeds, England:—

This district (Leeds) is the centre of the woollen trade, and in this immediate neighborhood you may see consignments of woollens, worsteds, flannels, blankets, etc., being sent out each day to the business marts in every continent of the world.

Magnitude of the Trade.

Some slight idea of the magnitude of this industry may be gathered from the fact that in the Yorkshire mills alone there are in the neighborhood of 5,250,000 spindles, and 100,000 looms in active operation, and when we take into consideration the allied crafts, such as bleachers, cloth finishers, cloth millers, cloth raisers, dyers and finishers, flock manufacturers, fullers, scribblers and waste openers, hosiery manufacturers, mungo and shoddy manufacturers, sizers, winders, warpers and beamers, wool combers, scourers and woollen printers, an outsider stands in amazement at the prodigious importance of the enterprise. What is there about this district which differs from any other, and which enables it to compete in the world's markets against adverse tariffs from 30 per cent. in Canada to 90 per cent. in other countries, and still to make money? This should be a matter worth the best expert skill of Canada to fathom.

A Study of Existing Differences

After a year's experience here, and with the best facilities placed at my disposal by the manufacturers, I think I can at least show where the difference exists, and give at least some of the reasons for the superiority of the goods manufactured in this district. For at least 500 years this district has caused the world to designate it the "hub" of the woollen trade, without a rival as regards beauty and elegance of design, perfect workmanship and cheapness in price.

Canada at a Disadvantage.

A very vital question here arises, can the Canadian woollen manufacturer to-day compete with the manufacturers of the Leeds and Bradford district? After a most careful scrutiny and investigation, I think, for the present at any rate, the q tion must be answered in the negative. Even with a 30 cent. duty and 3,000 miles of freight as against the Bri manufacturer, Canada cannot hold her own. She may poss have a fighting chance in the cheaper and poorer grades, but the finer cloths she is not in the race, but is flagged half along the track.

Some Pregnant Reasons for British Superiority.

But why, with the advance Canada has made in manufact ing on all hands during the last 10 years, why cannot compete?

1. She has not the machinery requisite to do the best wo The manufacturers of Leeds and Bradford district are eas first in their wool and yarn working machinery. They kn what is required, and they will have nothing but the best. La engineering establishments cater for this trade alone, wh neither time nor money are any object, and where some of most skilled engineers in the world labor for its fulfilment.

2. The want of technical schools, where practical training this branch of industry is given. This is a prominent factor the work of the universities here. In the schools of art a design, and in the technical schools, this subject is given su prominence that any lad of an artistic or mechanical turn mind is at once captured and subrogated to the requirements the trade. This Canada has not yet applied herself to with a great amount of success. England and Wales expended $5,95 940 in technical education in the year 1902-03.

3. The large mills here have such an enormous output th an operator has only one class of product going through hands. His forefathers for 100 years have been the same class operators, fathers have taught their sons and daughters in th particular line, and thus have we the accumulation of the perience of ages focused and interned in the present operati He can only do one class of work well. If his work is to tu out white blankets, he is no use at colored blankets, and v versa. The workman is a perfect automatic machine, capable doing perfect work along one line, but totally indifferent as

everything else. For the same reason the cost of production here is much less than one half the cost of production in Canada.

4. Canada cannot compete and can only hope to emulate the dyers of this district for the same reason. This branch of the trade above all others is here seen in its perfection, the result of ages of patient experimental work. This success has only been brought to its present perfect condition by myriads of failures, by unlimited use of money, and by men for ages giving of their best as a willing sacrifice to its fulfilment. In this regard I feel sure that the climate and the water have played a somewhat prominent part in its accomplishment. The moist, damp, but temperate climate, without any great extremes of heat and cold, together with the soft unmineralized water, have no doubt been great factors in assisting to this end.

Query. Is it possible to have this dyeing trade carried on to its best fulfilment, a fulfilment in which air and water play so prominent a part, otherwise than in such a climate, and with such water?

5. England also has the advantage of cheap, expert, skilled labor ready to her hand. Canada cannot expect to obtain this labor for some time. Operatives of this class do not care to emigrate. What inducement has a young country to offer them? They desire to work as their fathers have done. Their horizon is limited. Free grants of land have no attraction for them. They will only emigrate in families when they are assured of steady and continuous work in this particular line. They will rather bear the hardships of life and the pinching of poverty entailed by the smallness of wages here, than launch out into the unknown, and I am fain to admit that from their standpoint they are right. Such operatives have simply become through ages of application to their special work automatic machines.

6. England also has the advantage in being the wool market of the world, and in this way has the pick of the raw product to choose from at a much better price.

In What Way Can Canada Compete?

Then in what way can Canada hope to compete?

1. By purchasing the best up-to-date machinery, no matter what the expense may be.

2. Importing heads of departments from here who know the business from the bottom up, and who are also graduates from the textile schools.

3. Importing from here workmen in special lines, they and their families, because their work is generally along one line, and each child naturally excels in the line in which his father labors.

4. Have the different provincial governments establish, in connection with the high schools, colleges, and universities, practical technical schools, where aside from any book knowledge the practical side of the question shall be taught, and from which may issue not a phalanx of professional men, but a great army of expert workers, who by their endeavors will one day hold the high distinction of having raised Canada from mediocrity in woollen manufacture, to the equal of her competitors.

Skilful Workmen by Inheritance.

The magnitude of this industry impresses itself more forcibly every time I go through these large factories, where you see thousands of spindles, and hundreds of looms moving as if by magic and you could almost believe it is magic when you see the beautiful products brought forth by the skilled operator, who, on inquiry, you find has been employed in the one factory, and has been doing that particular work for ten, twenty, thirty or forty years, and his or her father and grandfather before him or her.

Product of Art and Technical Schools.

I then inquire about the foremen, and those who direct the output of these looms and machinery, and I find that 90 per cent. of them are either men who are naturally born to the "purple," or are the product of the best art and technical schools and colleges of the district. Is it any wonder that these technical art and design schools are princely endowed by the men who have made their hundreds and thousands of pounds from the ideas and designing capabilities of their foremen?

The Yorkshire man is a great character, worthy in business of the admiration of the world, thoughtful and resourceful, quiet, deliberate, persevering and conservative, filled with a grand conception that in him lies in any line the attributes of success, and for this reason perhaps too much indifferent to the rush and stress of the twentieth century's business life.

"No man can equal Yorkshire in woollens, worsteds, blankets and textiles," so says the Yorkshire operative, and with this inborn faith he day by day does his every day duties, and does them well, knowing full well that through his abilities, genius and adaptability inter-woven into the warp and woof, from which he is forming the cloth for the garments of the world, he is building up his country's honor, and his country's fame and renown the wide world over, doing his part "whatever betide."

Scholarships for Technical Education.

I would here suggest to the merchant princes, and wealthy men of Canada the advisability of establishing scholarships in connection with technical education, which would enable some of the bright Canadian youth to take a thorough course in the textile and technical departments of the colleges of this district. I know of nothing in this regard which should redound more to the fame of the donors, and from which Canada would reap more real business advantage in the years that are to come.

This report is valuable for the information contained with regard to the size and superiority of the British woollen industry. In addition to the comments made by Mr. Jackson, however, respecting the disadvantages from which Canada suffers in competition, we may add the following important facts:—

Duty.

In the first place only certain lines of woollens manufactured in Canada enjoy the preference protection of 30 per cent.; blankets, hosiery and knitted goods of all kinds are still under the 23⅓ per cent. preference duty. Further than this, the protection extended in any branch of the Canadian woollen trade is more than counterbalanced by the vast differences which exist in the various elements entering into the cost of production. In the case of installing a plant, the cost of machinery and many other details, to say nothing of the enormous difference in the cost of labor, the Canadian mill is handicapped by more than 30 per cent. Added to this is the fact that transportation rates from great shipping centres like Liverpool to various portions of the Dominion are lower than the rates to these same markets from the woollen producing centres of the Dominion.

Machinery.

It may be true that some of the Canadian mills are not as well equipped as the highly specialized factories of Great Britain. It may reasonably be asked, however, what encouragement is offered for further investment on the part of men who have already sunk thousands of dollars of their own and others' money in an industry which, even under very careful management, is subject to the enormous competition arising from annual importations into our small market of more than fifteen million dollars. And for the same reason, how can it be expected that British workmen will leave employment at home, even at small wages, and emigrate to a country where the industry upon which they depend for their livelihood is so depressed that the majority of the mills are running only on faith and for part time?

It is to the credit of the Canadian mills that in some lines their product is fully equal, if not better, than the fabrics produced in Yorkshire,—the wonder is that they have done so well. Experts from Great Britain have complimented Canadian woollen mills upon their enterprise and have repeatedly made the additional statement that there is nothing in the climatic conditions in Canada to prevent the building up of a large and successful woollen industry. What is possible will not be known until proper tariff conditions are secured and confidence restored in Canadian woollen mills and their products.

POWER DEVELOPMENT AT NIAGARA

A Short Account of the Hydraulic and Electrical Development Work now under way at Niagara Falls, Ont.

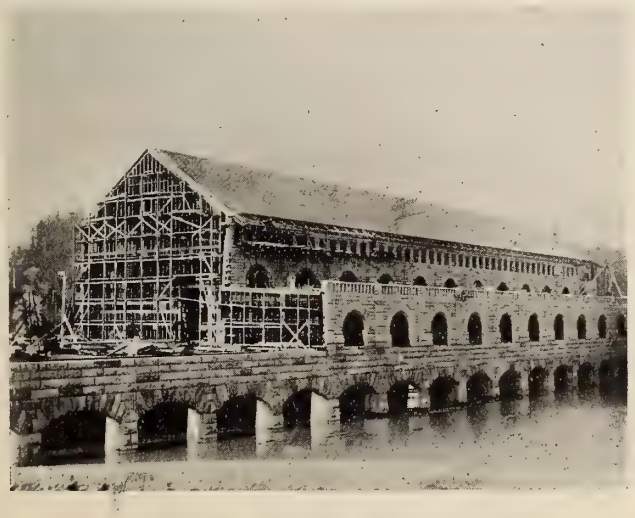
Niagara, whose name for nearly three hundred years has been familiar to the world as the embodiment of all that is ideal in the way of scenic grandeur, seems destined soon to become world-famous as a power-distributing centre as well.

The history of its rapid development forms one of the most interesting chapters in the industrial life of our continent. Twenty years ago hydraulic engineering was thought to be of so little importance that it received next to no attention in the large technical colleges of America. Fifteen years ago, in 1890, the total electrical horse power used in the manufacturing industries of the United States was only 15,000. Ten years ago, in 1895, the principle of the alternating current was for the first time successfully utilized in connection with the supply of power to factories. In the light of these circumstances it is little less than marvellous that at the present time there should be actually within sight of the Niagara district alone a development aggregating nearly 700,000 horse power. Plants already in operation are delivering daily 156,600 h.p., and when the construction work now under way is completed there will be an hydraulic development sufficient to generate over four times that amount.

Engineers are unanimously of the opinion that for the prosecution of this work along the Niagara frontier the advantages offered on the Canadian side are much superior to those across the river. Owing to the greater declivity in the bed of the river on the Canadian side most of the water (probably three-fourths of the entire volume) reaches the lower stretches by way of the Canadian or Horse Shoe Falls. This fact in itself is decidedly favorable to the establishment of large plants on the Canadian side. Moreover the Canadian shore is particularly fortunate in the matter of drift ice and floating debris. Anything of this nature coming through the Canadian channel generally follows the middle course of the river, while on the United States side there is a tendency for it to hug the shore, thus causing at times trouble and annoyance to plants located in that quarter. It is true that up to the present the United States has outstripped Canada in the development of power at Niagara, but this may be easily explained by the extensive local market available on that side of the river.



Model by The Ontario Power Co., Showing Works in Queen Victoria Niagara Falls Park.



Power House, Canadian Niagara Power Co.

The Canadian Niagara Power Company.

Of the three large companies whose plants are now in process of construction on the Canadian side, the first to commence operations was the Canadian Niagara Power Co., a branch of the Niagara Falls Power Co. located just across the river. Their charter dates from 1892. They were also the first actually to produce power, having put two of their large 10,000 h.p. generators into successful operation on January 1st of the present year.

Their plant is situated about half a mile above the falls in the Queen Victoria Niagara Falls Park. The water is taken in from the river through a short canal and forebay and discharged through penstocks into turbines near the bottom of a wheel pit. This wheel pit is excavated out of solid rock, and is 580 feet long and 160 feet deep. From here the water is carried away to the lower river by means of a tunnel about 2,000 feet long, having its portal just below the Horse Shoe Falls.

The power house is situated immediately over the wheel pit. It is a handsome building of white stone, and is equipped with eleven large generating units, each of which has a capacity of 10,000 h.p., making 110,000 h.p. in all. At the top of the hill, just outside the park limits, a transforming station has been erected where the voltage may be raised for long distance transmission.

For the sale of their power, the Canadian Niagara Power Co. will look in the first instance to Canadian consumers, though preparations are being made to market it in near-by United States points, should such a course become desirable. The right-of-way for a transmission line to Buffalo has been secured via the Canadian river bank and Fort Erie, while cable connections over the upper steel arch bridge will enable them to operate in conjunction with their allied company in Niagara Falls, N.Y. Until such time as the Electrical Development Co. are in a position to supply power, the Toronto and Niagara Power Co. will probably be a large customer for the power of this company.

The Ontario Power Company of Niagara Falls.

Next in order of the development comes the Ontario Power Company, incorporated under a Dominion charter in 1887. Their head works are located in the smooth water of the upper river, above the first line of rapids opposite the Dufferin Islands. From here three main conduits lead the water through the park to a point on the cliff below the falls. Thence it is taken by penstocks in tunnels through the cliff to the generating station, situated in the gorge on the very brink of the river.



18-Foot Main Aqueduct, The Ontario Power Co.

The intake proper consists of concrete piers supporting a continuous reinforced concrete curtain wall, extending both below and above the normal surface of the river, and built at an obtuse angle to the current so as to deflect it sufficiently to carry off ice. A gathering wall, submerged for the most part and roughly paralleling the shore line, leads from the end of the intake to the screens, enclosing an area of about eight acres. An inner forebay, with an area of about two acres, extends from the screens to the gates, which are three in number, one for each of the main conduits. A substantial and artistic building covers the gates, and an equipment of boilers and steam pipes provides against freezing.

Of the conduits one is now almost complete. It is 6,180 feet long and 18 feet interior diameter, and when flowing at full capacity it will pass about 3,900 cubic feet of water per second. For its construction steel plates ½ inch thick were used, with double riveted joints. To secure additional stiffness seven inch bulb tees were riveted to the upper half of the circumference of the pipe at intervals of four feet. Before the trench in which it was erected was backfilled, the pipe was thoroughly cleaned with sand blast and covered with three coats of paint, both inside and out. Conductors have been arranged to protect against stray electric currents, while an open relief and spill way through a tunnel provides against fluctuations of head.

From the lower end of the conduit six penstocks lead through shafts and tunnels to the power house at the bottom of the cliff. Each penstock supplies water for a 10,000 h.p. unit. From this first conduit therefore a development of 60,000 h.p. will be possible, making the ultimate development with three conduits 180,000 h.p.

The generating station is a flat-roofed building somewhat after the Egyptian style of architecture. It is 76 feet wide and 65 feet high, and for the full capacity will be about 1,000 feet long. It contains only the main generators and their turbines. Concrete draft tubes lead from the latter to the tail race, situated in the foundations. The gross head between forebay and tail water levels is 200 feet, of which 175 is effective on the turbines.

The transforming and distributing station is in process of erection on the bluff above the conduit. It is of imposing appearance, and in general keeping with the æsthetic effects everywhere noticeable through the park. This separation of the switchboard and attendant apparatus from the power house removes the possible dangers incident to the operation of high voltage switches, and concentrates the management of both generators and transformers in a single operating room.

Electrical Development Company of Ontario.

Further up the river, past the power house of the Canadian Niagara Power Co. and between it and the head works of the Ontario Power Co., is situated the site upon which the plant of the Electrical Development Company of Ontario is being constructed.

The works of this company and of the Toronto & Niagara Power Co., subsidiary to it, are of especial interest to Torontonians, as preparations are being made to transmit a large amount of the power generated to that city. A through electric service between Toronto and the Falls will also be established. The gentlemen behind the project are well known in Canadian financial circles, and include among their number Mr. Frederic Nicholls, Mr. William Mackenzie, Lieut.-Col. H. M. Pellatt and Hon. George Cox.

Generally speaking, their plan of hydaulic development is similar to that of the Canadian Niagara Power Co. Water is diverted from the rapids above the falls into an immense wheel pit, thence by tunnel into the lower river. The execution of the plans however has involved a number of daring engineering feats which have made the progress of the work decidedly spectacular.

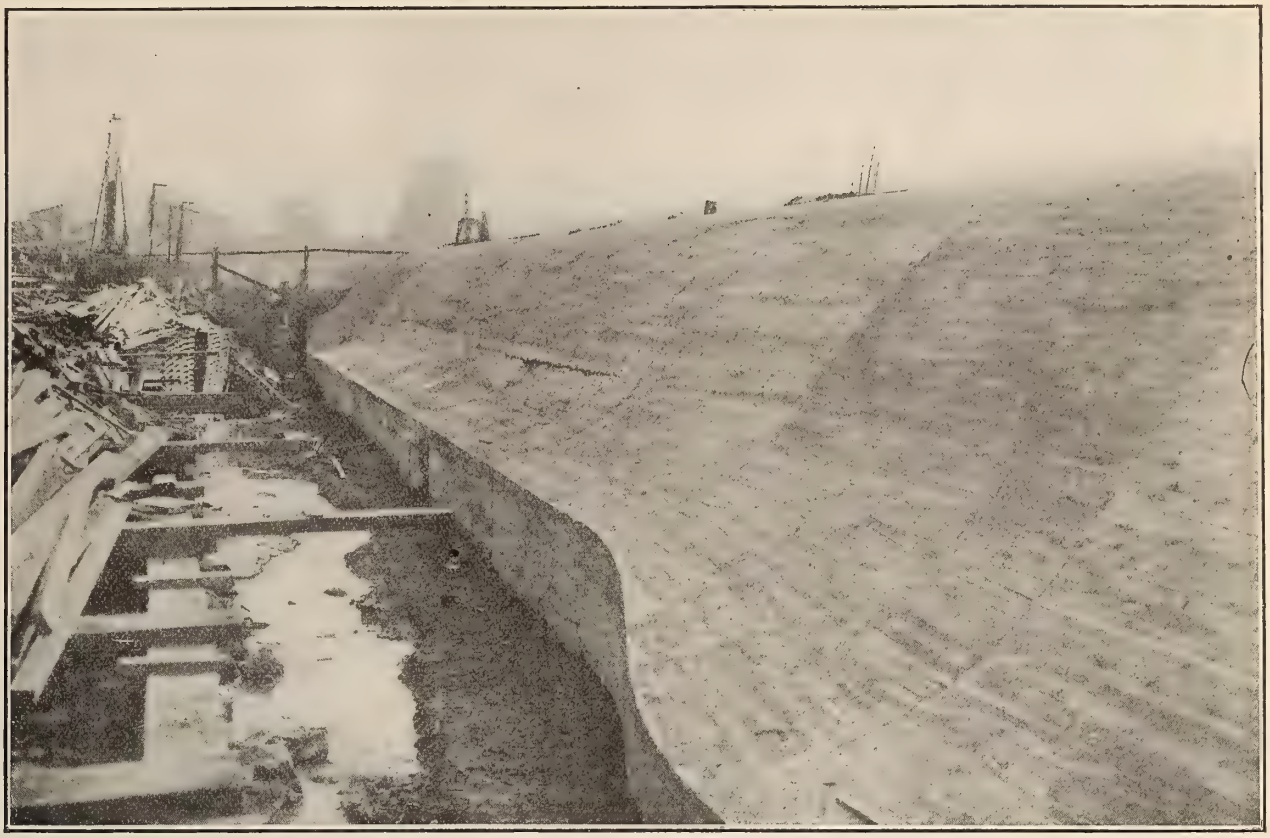
At Tempest Point, the site selected, a turbulent cascade rushes by, creating at once an impression of irresistible power. To build a coffer dam that would hold back these roaring waters and reclaim eleven acres of the river bed for construction purposes was a task which might well have staggered less resourceful engineers than those in charge of the work. Operations were begun on April 2nd, 1903, and for some distance from the shore crib after crib was built into place with comparative ease. But when the work had reached a point where it had to be carried on at right angles to 14 feet of water flowing at a high velocity the real difficulty began. A platform was suspended out for sixteen feet from the end of each successive crib, and standing on this the engineers had to sound every inch of the river bottom with an iron rod, the cribs being built to fit afterwards. An idea can be



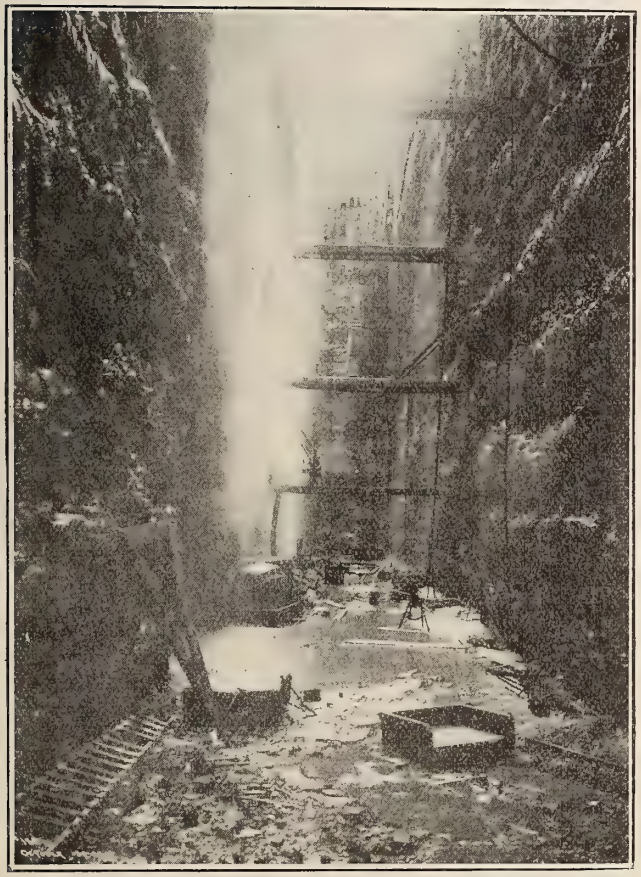
Generating Station Under Construction, The Ontario Power Co.

gained of the force of the water when it is mentioned that frequently the sounding rod was bent almost at right angles. To break the force of the current, a fender of heavy timbers, held in position by three steel cables from some works higher up the river, projected out beyond the last crib in place. On two occasions it was carried completely away. The unwatering of the site last spring revealed a river bed of solid rock, strewn with immense boulders and badly fissured.

The permanent outerworks consist of a long diverting dam running out for some 200 feet into the midst of the rapids and at



The Immense Concrete Gathering Dam, Electrical Development Co.



Wheel Pit from the Lower Level, Electrical Development Co.

right angles to them, then swinging round and paralleling the current up stream. It is in all about 850 feet in length. At its upper end the crest will be on a level with the normal surface of the river, while at the lower end it will be partially submerged in order to allow ice and refuse to be swept out of the forebay by the cross currents. The supply of water afforded by this dam will be close on to 2,000,000 cubic feet per minute, actual requirements being estimated at 700,000 cubic feet.

Two lines of masonry piers, with arches below the surface of the water, support continuous concrete walls which separate the outer forebay from the ice racks. The wheel pit is 415 feet long and 25 feet wide, and is sunk through solid rock to a depth of 160 feet. At its bottom will be installed eleven pair of vertical turbine wheels, rated at 12,500 h.p. per pair. These will rest on solid rock and masonry foundations. The water after leaving the penstocks will be carried by draft tubes into two side tunnels, which unite to form a common tail race some distance from the end of the wheel pit. The discharge is effected by means of a tunnel running in a straight line beneath the bed of the river to a portal in the base of the escarpment behind the Horse Shoe Falls. This affords the shortest possible run, and will be an important factor in keeping down the first cost.

The power house will be a handsome structure in the style of the Italian renaissance, and when completed will no doubt add much to the beauty of the park. Six hundred acres of land fronting on the Welland River some two miles away have been acquired for manufacturing sites. The transmission of power to Toronto will be carried out by the Toronto & Niagara Power Co., who have already secured a private right-of-way with a minimum width of eighty feet. This will allow ample room for the construction of a double track line of railway, as well as the placing of the steel towers which will support the transmission cables.

It will be a matter of considerable satisfaction to Canadians to know that apart from the muckers and ordinary laborers, ninety per cent. of the workmen engaged on this important undertaking are their own fellow countrymen. The material that is being

used is also for the most part Canadian. "Our instructions from head office," said Mr. Beverley R. Value, resident engineer of the Electrical Development Company, "are always to give the preference to Canadian material, other things being equal or nearly equal. A very large proportion of our supplies are of Canadian manufacture, and I must say that thus far the results have been most satisfactory."

For illustrations and general information our acknowledgments are due to Mr. A. H. Van Cleve of the Canadian Niagara Power Co., Mr. J. R. Harsch, of the Ontario Power Co., and Mr. Beverley R. Value. We are also indebted to Mr. Geo. W. Davenport, of the Niagara Falls Power Company for permission to make use of data contained in his excellent little volume entitled The Niagara Falls Electrical Handbook.

THE WEST HAS MILLIONS TO SPEND. ARE YOU GETTING YOUR SHARE?

From The Commercial, Winnipeg, Nov. 26, 1904.

Eighty million dollars is a conservative estimate of the West's return this season from crops, live stock and dairy products. From this year's crops of wheat, oats, barley and flax alone will be realized the tidy wage of seventy million dollars, or, to be more exact, perhaps, $69,749,975. Taking last week's closing quotations, our estimate is, in detail:—

Wheat, 60,000,000 bushels, average grade 3 Nor., at 87c. per bushel	$52,200,000
Oats, 44,600,000 bushels, average grade 3 white, at 8.30 c. per bushel	13,380,000
Barley, 1,500,000 bushels, average grade No. 4, at 35c. per bushel	3,675,000
Flaxseed, 530,500 bushels, at 95c., Fort William basis	494,975
Total	$69,749,975

The estimate of sixty million bushels wheat is practically the same as the figure given by the North-West Grain Dealers' Association, and the other figures are taken from the Association's statement. The grain dealers put the wheat yield at 59,857,190 bushels, while other experts place it as high as sixty-three and sixty-five millions. The Warehouse Commissioner estimated the crop at 60,000,000 bushels. As to the average grade, an analysis of Winnipeg inspections indicates that it is rather better than No. 3 Northern, but we have assumed the lower grade in order to be on the safe side.

For a new and undeveloped country $70,000,000 is a good season's wage especially when you consider that there are several other important sources of wealth to be taken into account. The hay crop has been a large one, and baled stock was worth last week on track Winnipeg $7.50 per ton. Owing to the abundant pasture the make of dairy products has been particularly large. In fact the dairy industry is growing every year, as farmers are giving more attention to stock. Then there is the great live stock industry to be taken into consideration. In fact seventy millions is away short of the actual value of the crops, animals and animal products produced by Manitoba and the Territories this year. Thanksgiving Day found the West feeling decidedly "good" in the possession of an ample "wad."

Other sources of revenue must not be overlooked. Numerous coal mines, natural gas wells, and oil properties have helped to swell the West's total wage account, while the steady appreciation of land values is adding millions to the credit side of the West's balance sheet.

In British Columbia returns from the fruit growing industry promise to be larger than ever, the use of proper machinery and introduction of more economical systems is putting the mining industry in better shape than it has been for years, and making it more profitable, while there is the promise of a great development in the herring industry, and it is estimated that almost a million dollars found money, so to speak, will be derived from the export of dog salmon to Japan.

THE ADVANCE IN RATES ON GRAIN AND GRAIN PRODUCTS.

In response to a protest filed with the Railway Commission against the somewhat abrupt advance in rates on flour, grain and mill stuffs from Ontario to the Maritime Provinces, the following communication has been received from the Chief Traffic Officer of the Board. It might be explained that the law requires an advance notice of ten days from the railways when the desire is to raise rates. The tariffs complained of were issued on an advance notice of four or five days.

OTTAWA, 29th December, 1904.

W. H. D. Miller, Esq.,
Manager Transportation Department, C.M.A.,
Toronto, Ont.

Dear Sir,—In the matter of advanced rates on grain and grain products from Ontario points to certain points in the Maritime Provinces, which were published by the Canadian Pacific and Grand Trunk Railways without the full ten days' notice as required by the Railway Act, and with reference, also, to your letter of the 19th inst., addressed to the Secretary of the Board of Railway Commissioners.

I have to advise you that an order has been to-day signed by the Deputy Chief Commissioner, a copy of which I herewith beg to enclose. Yours truly,

(Signed) J. HARDWELL.

IN THE MATTER OF

The complaint of the Canadian Manufacturers' Association, on behalf of the milling interests of the Association, and other millers and grain merchants, against the Grand Trunk Railway Company of Canada and the Canadian Pacific Railway Company, for advancing the rates on grain and grain products from the Province of Ontario to the Maritime Provinces, in contravention of the Railway Act, 1903.

On November 30th and December 1st the Companies named respectively issued Supplement No. 3 to G.T.R. Tariff C.R.C. No. E. 177 and No. 4 to C.P.R. Tariff C.R.C. No. E. 177, increasing the rates on grain and grain products, which supplements they declared were to become operative December 5th instant:—

The issue of said Tariffs by said companies to take effect at the time stated being clearly contrary to the terms of Section 262, sub-section 2 of the Act,—

IT IS ORDERED

That the rates imposed prior to the issue of said unauthorized supplementary tariffs shall be deemed to have been in force until the 18th day of December, instant; and that the supplementary tariffs issued on November 30th and December 1st, advancing the rates on grain and grain products, shall be deemed and are hereby declared to have come into effect and become operative on the 10th day of December, instant; but subject to and upon the condition that the said companies shall without delay refund to the shippers affected, individually and respectively, the amount or amounts charged and collected by them, or either of them, in excess of the amount properly chargeable under the previous tariffs, between the 5th and 10th days of December, instant.

(Signed) M. E. BERNIER,
Deputy Chief Commissioner,
Board of Railway Commissioners for Canada.

Business Opening Wanted.

Mechanical engineer, having executive ability and 14 years' experience with large manufacturing concerns in Canada and United States, desires to become financially interested with some suitable manufacturing concern in the capacity of Manager or General Superintendent. Address replies to Box G, INDUSTRIAL CANADA, Toronto.

Transportation Department

John R. Marlow, the new Manager of the Transportation Department of the Canadian Manufacturers' Association, takes up the important duties of the post backed up by fourteen years' experience in matters pertaining to freight movement. He began his railroad career with J. N. Sutherland, C.P.R. General Freight Agent at Toronto, and was later under E. Tiffin. Succeeding W. B. Lanigan as Travelling Freight Agent for Ontario, he later became M. H. Brown's chief clerk, and at the time of his present appointment occupied that position in Assistant Freight Traffic Manager Bulling's office, his connection having been entirely with the C.P.R.

In his new post Mr. Marlow will be called upon to protect at all points the interests of the shipping public against the execu-



JOHN R. MARLOW,
Mgr. Transportation Department.

tives of the railways, and to secure what rights and privileges he can for them. While representing the Manufacturers' Association his position is essentially a public one, since the interests of the members are on a line with those of shippers in general. His predecessor, Mr. Miller, has been successful in winning several important concessions, and it is confidently expected that the work will be ably carried on by the new manager.

THE RAILWAY ACT—A REMINDER.

The Railway Act of 1903, in effect since the 1st of February last, measures the relationship between the railways and the public. It gives a more liberal interpretation than the previous Act to public rights with respect to transportation. Provisions were made in the old Act for the protection of the public, provisions which probably appealed to the parliament which framed the Act as reasonably liberal. The weakness of the Act was in the agency by which public protection was to be ensured, that is, the Railway Committee of the Privy Council. As a result of this defect, very little was heard of the rights of the public. When these rights were enforced, on those few occasions like the oil case, it was with much expense of time and money. The protection offered to the public by the old Act might be said therefore to be of little purpose, and those public privileges and rights practically fell into desuetude.

Under the present Act the protection of the public is more adequately provided for, both in the wording of the Act and in the Board of Commissioners by whom it is administered. It may be that there is no danger of a similar fate befalling the public under the present Act. Even if the public are not alive to their rights, the Board, when it disposes of the mass of tariffs, to which it has been called upon to attach its first approval, will doubtless take up some of the more important of these tariffs to examine the rates and conditions for the purpose of testing their reasonableness and legality. The Board may also consider and report upon the important transportation questions affecting the development of Canada. In any case, the public should be watchful to see that their rights are respected. Undoubtedly the railways will exercise the advantages which accrue to them under the Act. They may be inclined to disregard the public rights. Watchfulness on the part of the public and a determination to exercise the privileges which accrue to them under this new and improved legislation are essential, in order that the advantages and protection provided for the public may not be lost to them by default.

Already the railways have evidenced a desire to ignore the Act by putting in effect important advances in freight rates, without giving the ten days notice of their intention to do so. The Association filed (as below noted) a protest with the Railway Commissioners.

The Transportation Department cannot of itself provide protection against all infringements of the public rights. In so far as these infringements come within the knowledge of the Department, they will be dealt with with the vigor which circumstances may warrant. The Department must rely upon individual members for assistance in asserting individual and to some extent the general rights and interests.

RAILWAYS AND THE EXPROPRIATION OF COAL.

The disposition at times of the railways to appropriate coal, in transit to manufacturers, though causing some inconvenience and loss to the owners, has been defended by the railways as a measure of necessity (somewhat like the right to expropriate land) which on occasions the public good and the transportation of mails may warrant. Inquiries into the matter have failed to discover that the right to appropriate coal or any other property entrusted for carriage to a transportation company falls as a privilege to railways.

The contract is to deliver coal quite as much as silk, and while the average manufacturer or individual may not be disposed to dispute with the railway the legality of its action, it is proper that the manufacturer should know that the railways have no legal right to appropriate his property and that he is justified, where his property has been seized for railway purposes, in asking for recompense, not on the basis upon which he purchased the coal, but upon a basis that will allow him some reasonable remuneration, over and above the cost of the coal, for at least his

COMMENTS ON THE YEAR'S TRADE IN CANADA.

Looking back over the past year, Canadians have many causes for gratitude and rejoicing. The year has been one of peace and plenty, and the statement may be made without undue boasting that no six millions of people on the face of the earth live under better laws and enjoy uniformly as many material comforts and blessings as the people of the Dominion of Canada.

The long-awaited development of Canada, aided by many wise legislative measures, has brought a time of true yet normal prosperity,—a prosperity which is likely to increase, and which is already attracting the attention of every other portion of the civilized world. A few features of the year's development are worthy of special attention.

General Trade.

Stock taking returns for the past year show that in many lines the volume of trade has been greater than in the previous year, while many commodities have increased in price. Farmers, manufacturers, retail merchants, and workingmen have, speaking generally, made advances on previous years. The public bank deposits show an increase of $60,000,000 over 1903, while Canadian securities have recovered from a somewhat severe depression and are facing the new year at appreciative values, and with good prospects.

Manufacturing.

The manufacturing industries, while enjoying considerable prosperity in many lines, show some noticeable exceptions, and though the German surtax and the anti-dumping regulations have had a salutary effect in restraining foreign importations at "illegitimate cheapness," there are many evidences of the need of the approaching general revision of the tariff. The unusual depression in such important industries as lumber and woollens has seriously affected an otherwise general prosperity, while many smaller industries are still suffering severely from the present conditions.

The year, however, is marked by notable advancements in almost every branch of industry. Particularly is this true of the qualities and finish of various kinds of goods and the improvements made in organization and business management.

The growing desire on the part of the Canadian people to patronize home industries, must also be looked upon as one of the most admirable and gratifying developments of the year.

Exports and Imports.

Bradstreet's review shows that Canadian foreign trade, imports and exports, for the year ending September 30, 1904, the latest for which official statistics are issued, amounted to $455,637,237, against $481,059,335 for the previous year, a decrease in the total volume of $25,422,098. The total imports, not including coin and bullion, amounted to $240,719,637, an increase of $2,272,741 over the previous year. Exports of domestic products show a decline of $25,288,321. This establishes a trade balance against Canada of $27,561,062. Exports to the United States for the last fiscal year amounted to $73,173,549, as against $71,783,000 for the previous year, an increase of $1,390,549. From the United States goods to the value of $150,826,515 were imported as against $137,605,000, an increase of $13,221,515. Exports to Great Britain are those in which the most serious decline is felt. This year they amounted to $117,591,375, against $131,202,000 for 1902, a decrease of $13,610,625. Imports from Great Britain amounted to $61,770,379, an increase of $2,883,478.

The trade balance against Canada and the reduction in our exports to Britain must be regretted, as also the increasing tendency to increase our imports from the United States, in the face of so slightly increased exports to country. These tendencies, while affording reflective thought for Canadian business men, should also be carefully noted by the Canadian Government and people, and should have an effective influence upon the coming tariff revision.

Government Departments.

There are many interesting features in the work of the various departments of the Canadian Government which might be referred to, but which lack of space and statistical information forbids.

The aggressive policy of the Immigration Department has proved very successful. Almost 150,000 new settlers came to Canada in 1904. The majority of these settled in the North-West Territories and their work will add materially to the production of national wealth. The continued influx from the United States in spite of the most strenuous opposition from many sources in the Republic, must be particularly gratifying, and calls for distinct commendation.

The establishment of the Railway Commission marks one of the greatest advances of the new century in Canada. The results so far achieved through its labors not only show its necessity, but also indicate the manifold and widespread benefits which are possible in such an important field through the deliberations and untramelled action of an independent tribunal.

The construction of the Grand Trunk Pacific with all the activity and expenditure involved should not only benefit many Canadian workingmen and manufacturers, but will also add to our transportation facilities another great transcontinental route, and will exercise a beneficial effect upon all classes of trade.

While the imports during the past year have largely increased there is a sincere and growing desire on the part of the Government to remove the "dumping" evil, and the Department of Customs has under way a specially organized staff to make this feature of the work particularly effective. At best, however, the new regulations are looked upon as being only of a temporary nature, intended to suffice until permanent measures are adopted. It is earnestly hoped that nothing may arise to prevent the early settling of the new Tariff Commission as many branches of trade urgently require changes which will enable them to produce more cheaply and also help to keep Canadian money in circulation at home.

Progress in Live Stock.

The Live Stock Branch of the Department of Agriculture has been pursuing an energetic educational policy for the improvement of the live stock of Canada, and has been working for the extension of the markets for live stock and live stock products.

A variety of means have been employed. Auction sales and winter fairs have been encouraged; good practical speakers have been supplied for the meetings of Farmers' Institutes; articles on breeding, feeding, etc., have been given wide circulation in the press; and short courses in judging the various classes of stock have been held from place to place.

The resulting increase in the output of stock and stock products has been very gratifying. Taking the figures for the Province of Ontario for the four years 1896-97-98-99 we find that the aggregate output of beef, bacon and cheese for that period totalled 147 millions of dollars; for the next four years ending with 1903 these same products totalled 230 millions of dollars. Our exports are just as encouraging. In 1890 the exports of animals and agricultural products amounted to $35,445,629; last year they amounted to $112,043,365. Live stock and live stock products were over 60 per cent. of the whole. During the past year shipments of pure bred stock have been sent to South Africa and the Argentine Republic, and it is hoped a profitable trade will follow.

Taken as a whole, there are abundant reasons for satisfaction with the progress of the past year, and with continued energy, and wise legislation, we may look forward with confidence to the future.

TECHNICAL EDUCATION IN CANADA

Some General Remarks on the Situation in Ontario—Present Facilities and Future Needs—A Prominent Educationist on the Subject—What Technical Education has done for Germany.

Under the provisions of the British North America Act of 1867, the right to legislate on matters respecting education in Canada is left entirely to the governments of the different Provinces. For years Ontario has been carving out her own destiny in matters educational quite irrespective of what Nova Scotia has done, while Quebec has been pursuing a course quite different from that of either. There has been no attempt to co-relate the various provincial systems. No one has been vested with the proper authority to supervise the work that is being carried on. There has been no central bureau to suggest, to advise, to organize, or to encourage new movements with financial aid. On the contrary, each Province has been left to work out its own salvation in any way which it might see fit.

The various systems in vogue, while differing widely in matters of detail, are alike in that they are controlled by the Provincial legislatures, with the single exception of Quebec, where the schools are sectarian, and consequently under ecclesiastical control. For the most part, tuition in the public elementary schools is free. In the secondary schools a small fee is generally charged, but this may be remitted at the discretion of the local authorities. Their support is derived from three sources—school taxes, municipal or local appropriations, and provincial grants.

Departmental Regulations in Ontario.

The regulations of the Education Department of the Province of Ontario, where the public school system may be said to have reached its highest development, empower the local boards of school trustees to establish the following schools: (1) Kindergartens, (2) public schools, (3) night schools, (4) high schools and collegiate institutes, (5) art schools, (6) county model schools, (7) normal schools, (8) schools of pedagogy, (9) teachers' institutes, (10) mechanics' institutes, and (11) industrial schools.

Provincial aid is available for (1) elementary schools, (2) secondary schools, (3) schools for the training of teachers, and (4) technical schools.

Expenditure on Technical Education.

Upon the first three of these the Ontario Government expended during the year 1903, in grants, inspection, salaries, and the conduct of examinations, the sum of $629,039. On technical education so-called, consisting mostly of manual training and domestic science, the total expenditure amounted to only $14,534. It will, therefore, be seen that the expenditure on what may be regarded as pure academics was nearly forty-three times as great as the expenditure on technical education. The entire cost of conducting the Education Department for 1903 was $945,020. Technical schools in Ontario, therefore, received in that year only 1½ per cent. of the funds at the disposal of the Government for educational purposes.

One-Sided Education.

A comparison of the figures presented by other Provinces, where technical schools are in a less advanced stage of organization, would, doubtless, reveal even more startling descrepancies, but the statistics for Ontario will serve to illustrate the remarkable tendency that exists to make academics the be all and the end all of our educational system. That this is a mistake, even from the educator's point of view, is clearly recognized. Dr. J. A. McLellan, Principal of the Ontario Normal College, referring to the provision recently made for manual training in that institution, remarked that the aim and spirit of every teacher's work should be to learn to do by knowing and know by doing. "That the educational systems of this country have not produced the best results, have not come up to the earnest expectations of their founders and administrators, is due partially to the fact that in the organization of school curricula the whole man has not been taken into account. The constructive activities of the human being and their relation to mental action, have not received anything like adequate recognition. Manual training in its true sense should form a real part in every curriculum of liberal education. Heretofore there has been a mischievous divorce between brain and hand, arising, no doubt, from an unphilosophical dualism, not to say antagonism, between nature and man, things which cannot be put asunder in sound thinking."

The blame for this one-sidedness in our educational system does not attach altogether to the Government. They have given their endorsement to the teaching of manual training, domestic science and technical subjects, and stand ready to assist financially in the establishment of such schools. That they have taken this step shows that they are alive to the necessity of improving our schools along technical lines, though their failure to follow up this policy by advocating the general establishment of technical schools, and by organizing the various districts for the purpose of carrying on this work has called forth much unfavorable criticism from certain quarters.

Manual Training and Technical Schools in Ontario.

It is to the local board of education, however, that we naturally look for the initiative in matters of this sort, for it now rests with them to say whether or not technical schools shall be established. A small beginning has been made in some of the more progressive Ontario municipalities in the teaching of manual training. Classes are established in some 15 towns and cities with equipment for elementary and advanced wood work. The accommodation provided is sufficient to enable 580 students to take practical bench work at any one time. The total number registered throughout the Province is 4,500, and these receive instructions in periods varying from one to four hours per week.

Manual training, however, as it is carried on in our public school, is not technical education. It is merely the connecting link between the kindergarten and the technical school. Instruction in manual training is not given with a view to making a boy a carpenter, or a girl a dressmaker. It makes no pretense of fitting for any particular employment, and as a matter of fact, the statistics of other countries show that very few manual training graduates have become mechanics or artisans. But manual training schools continue in an effective manner and in a manner consistent with the advancing age of the pupil and his increasing powers of preception and comprehension, the basic principles laid down in the kindergarten. They also serve as a solid foundation for that more advanced form of instruction properly called technical education, which is directly applicable to trade and industry.

In this form of education, too, Ontario has made a small beginning. In Kingston, Brantford, Stratford, London, Berlin and Toronto schools are established, equipped with wood and metal turning lathes, forges, drills, jig saws, and other machinery for advanced metal working. Competent instructors gives courses on physics, mechanical draughting and elementary chemistry as applied to the arts, and practical laboratory work forms an important part in the training of every pupil.

Obstacles in the Way.

But progress in the spread of this movement is slow. No doubt the cost of buildings, equipments, and the salaries of competent teachers loom up very largely with local boards as arguments against the establishment of technical schools, especially where funds are limited. On the other hand it cannot be denied that in the extreme conservatism of the large majority of people towards questions of this sort lies the greatest hindrance to the development of technical education. As the Minister of Education points out, school trustees all over the Province have displayed much reluctance to depart from long-established programmes of study. Latin, Greek, and Euclid, by virtue of the

prominent place they have occupied in the curricula of European countries all through the dark ages down to the present time, seem to have inspired the guardians of our public schools with a certain amount of religious awe, and any effort to replace these studies to some extent by studies more in keeping with the requirements of this enlightened age never fails to meet with stubborn opposition. No doubt conservatism in matters of education often serves a useful purpose in preventing the hasty introduction of subjects which sometimes turn out to be mere fads, but it must be acknowledged that the experimental stage in technical education has long since passed, if the results that have been accomplished in Germany, France, and other countries are any criterion.

Mr. M. Parkinson on our School System.

At the annual convention of the Canadian Manufacturers' Association held in Montreal in September, 1904, a resolution was passed strongly advocating the adoption of a uniform system of technical education all over the Dominion. From the manufacturer's point of view, the desirability of such a policy is at once obvious, but it is refreshing to find one of the prominent educationists of the country lending to the movement his heartiest sympathy and support.

Matthew Parkinson, well-known for years as the principal of one of Toronto's most progressive public schools, now a member of the Board of Education for that city, and editor of *The Canadian Teacher*, was recently asked by a representative of the Association for his views on the question.

"I should like to see about two-thirds of the high schools of this Province closed up or else turned into technical schools," said Mr. Parkinson. "We are paying altogether too much attention to mere book learning. We are filling our boys up as full as they will hold with that abstract kind of knowledge which they derive from the exercise of their intellectual faculties. In other words, we are sending, not our boys, but our boys' heads, to school. We seem to have lost sight of the fact that they too, like ourselves, have more than one side to their nature. People talk of the three R's of education, but I prefer to speak of the three H's,—the head, the hand, and the heart, representing the intellectual, the physical, and the emotional or spiritual side of one's nature. A liberal education consists in the even development of all three of these, and any system which fails to take them all into account falls short of the accomplishment of its true purpose.

Stealing From Our Industries.

The tendency of our present system is to take the boy off the farm, out of the shop, and away from industrial pursuits. In the rural school, the pupils who show any ability are encouraged to prepare for the entrance examination. When they have passed the entrance the bait of a teacher's certificate is held out to them to induce them to attend the high school. After a course in the county model school, they find themselves in a position to earn the munificent salary of $250 or $300 a year. This is far from satisfying, but they will not look back on the course they have followed to see where the mistake has been made, for their ideas respecting labor have been gradually undergoing a change. They have come to look upon it as undignified, as beneath the notice of men who have taught school. They feel that they are no longer on a par with their former associates on the farm or in the shop, but that they are separated from them by that intangible something called education. So they decide to climb a little higher on the educational ladder, eventually developing into third rate professional men, office clerks, or possibly salesmen.

This is the process which results in many a man becoming a mere clog in society who, but for our educational system, might have achieved a distinct success in some industrial calling.

How to Correct the Evil.

My idea would be to retain say one or at most two high schools in each county, the others to be turned into small agricultural colleges, technical schools or trade schools, according to the requirements of the district. These schools should combine some of the features of the present system with practical instruction an industrial subjects. For instance in the agricultural school I would give them some mathematics, not too advanced, some literature and some history in the morning, while in the afternoon I would engage the student in practical field work, in dairying, in laboratory work, or give them lectures and demonstrations on the raising and breeding of stock. Such a policy would satisfy the demand for an academic education, while at the same time it would dignify labor, and open the eyes of the young men and the young women of Canada to the possibilities of lucrative employment offered them in industrial pursuits.

Technical Education for the Farmers.

The last Dominion census shows that in 1901 Canada produced 141,026,229 lbs. of butter. It is easily conceivable that one quarter or even one half a cent a pound could be added to the value of this butter if farmers were placed in possession of a little more technical knowledge regarding methods of production. One quarter of a cent a pound extra would have meant an increase that year in our national wealth of $352,565; half a cent, $705,131. The acreage devoted to wheat culture in the Canadian North-West in 1902 was 2,665,698. From this a yield of 67,034,117 bushels was obtained, or an average of 25 bushels an acre. Again, it is conceivable that the application of more scientific methods to farming might have resulted in an increase in the yield of half a bushel per acre. At 70 cents a bushel, the farmers of the North-West would have had $932,994 more in their pockets at the end of the year.

These are simply two out of a large number of instances which I might cite from the sphere of agriculture. They will at once suggest the importance of technical education from a financial standpoint to those engaged in that branch of industry. Apart altogether from the disciplinary value of such studies upon the students themselves, and their influence in bringing about a fuller and truer citizenship among our artisan classes, technical education is absolutely essential in the development of our immense natural resources. With it, providing we have a reasonable amount of protection, there is no reason why we should not hold our own among the nations of the world in the great race for industrial supremacy. Without it, we can never hope to attain the full fruition of our national heritage.

For specific examples showing the value of technical education as applied to manufacturing industries, I cannot do better than refer you to a paper read by Prof. Victor C. Alderson, of the Armour Institute of Technology, before the Chicago Literary Club."

Prof. Dean's paper, which is entitled "Technical Education in Germany," appears in the following abridged form in the Annual Report of the United States Commissioner of Education.

What Technical Education has done for Germany.

Since the close of the Franco-Prussian war the development of Germany has been remarkable. Hamburg has risen from the sixth largest port in Europe to nearly the first; German cottons are sold in Manchester, German steel in Sheffield and Leeds, German silks in Paris, and "Made in Germany" is a familiar mark to us. From 1875 to 1895 the population increased from 45,730,000 to 52,250,000. The working energy, during the same period, increased from twenty-five to more than forty-six million foot-pounds daily, or about four times as fast as the population. Between 1889 and 1896 the exports from Germany to China increased 86 per cent.; to Japan 92 per cent. The tonnage of German vessels trading with these countries has trebled since 1886. The number of German steamers in 1871 was 150; in 1897 this number had increased to 1,125. During the same period the tonnage increased from 82,000 to 900,000. That Germany has been successful in a commercial way during the past thirty years is not to be denied. Her success can be traced to her belief in the industrial value of scientific research and to her fostering care of the technical education of her people.

From an examination of special industries we can obtain a clearer idea of this influence. Consider the beet-sugar industry.

In 1840, 154,000 tons of beets were treated, yielding 8,000 tons, or 5½ per cent. of raw sugar. In 1899, with improved scientific processes, 12,000,000 were crushed, yielding 1,500,000 tons, or 13 per cent. of raw sugar. This increase from 5½ to 13 per cent. is the direct result of the work of technical men in control of the industry. Not only is Germany no longer dependent upon the West Indies for her sugar, but in one year she has sold Great Britain $50,000,000 worth. The manufacture of alcohol from potatoes is another lucrative field for German technologists. The cost has been reduced to about 25 cents per gallon, and experiments are in progress to determine its efficiency as fuel on steamers. The manufacture of artificial indigo by a chemical process was discovered in Germany in 1866. Less than 40 workmen were then employed; now more than 6,000 men and a staff of 148 scientific chemists are employed in the industry. The natural indigo is almost driven out of the market. They have also discovered a method of obtaining from steel processes ground slag which is used as a fertilizer, and England, although she produces quite as much steel as Germany, has become a good customer for the article. Recently there came the discovery by a chemist named Giebler of a process of hardening steel which makes it, it is said, 14 per cent. stronger, 50 per cent. lighter, and one-third less costly than the Krupp or Harvey steel. Twenty-five years ago the English and French makers of scientific instruments of precision were far in advance of the German. However, through the organization of the Reichsanstalt, an institution for original research and the standardizing of instruments, supported by the government, Germany has become the manufacturer of the best scientific instruments in the world. The value of her exports in this line is nearly $2,000,000, three times what it was fifteen years ago, and the work gives employment to 15,000 people.

Germany's Elaborate School System.

The Germans are fully alive to the necessity of being well prepared to engage in the struggle for industrial supremacy. Prince Bismarck once said: "The war of the future is the economic war, the struggle for existence on a large scale. May my successors always bear this in mind and take care that when the struggle comes we are prepared for it." Bismark's behest has been heeded. The Germans, by dint of long and thorough preparation, are ready for an economic war. For more than thirty years they have been preparing, and we can see in all directions the steps that have been taken to improve the technical side of education, so as to produce men who are capable of carrying Germany to the front in this industrial and commercial struggle.

The system of German technical schools comprises first a group of Technischen Hochschulen, situated at the capitals of the German States, like those of Berlin, Dresden, Munich and Carlsruhe. These are of the very highest grade, admitting only students who have a Gymnasium or Realschule course of study. They have without exception developed gradually from mere trade or building schools. Most of these were founded in the twenties or thirties of last century, and one—the Charlottenburg—was founded as early as 1799. These schools are all beautifully housed, have superb equipments, and are doing a high grade of professional engineering work. Next below them in educational work comes a great number of trade schools, like the textile schools of Crefeld. These trade schools are located at the centre of the industry to be benefitted and are distinctly utilitarian in character. Besides these there are many continuation and manual training schools. So numerous are these specialized schools that a German can always find one in which he can learn the latest and best principles, devices and methods of any trade or profession he may desire to follow. Add to all these the latest German innovation of commercial high schools and colleges of commerce, then wonder, if you can, why German competition is so keen and why German trade and industry are reaching every market the world over. The Germans have discovered that the secret of success in trade and industry depends upon education; not only the education of the library and cloister, but upon the education of the laboratory, the shop, and the modern lecture room.

AMONG THE INDUSTRIES.

Some time ago a company was formed, known as the Maine and New Brunswick Electrical Power Co. for the purpose of harnessing the Aroostook Falls. Arrangements have now been completed for the development of 4,000 h.p. at this point. It will be used for manufacturing purposes, and to operate a local electric railway.

The saw manufacturing concern of Walter Wilson & Son, St. John, N.B., established since 1845, have completed the erection of a large new brick factory on a site adjoining their present location. It is 39 x 105 ft., equipped with the most modern devices and thoroughly heated and ventilated.

Owing to the immense sale of their popular cereal Orange Meat, the Frontenac Cereal Company have had to greatly increase the capacity of their factory at Kingston. A handsome new wing has been built, which is now almost ready for occupancy.

The Government has decided to build a new jail at Winnipeg, to cost $200,000.

The salmon hatchery of the Dominion Government at Harrison Lake, B.C., has been completed. The building is 220 feet long by 40 feet wide. Five millions of salmon eggs are at present being hatched out there.

The costly plant of the Canadian Electro-Chemical Company at Sault Ste. Marie has been closed down once more, and it is unlikely that any further attempt to manufacture caustic soda and bleaching powder will be made in that quarter. Disastrous competition from United States products, which came in free of duty is said to be the cause for this action.

More capital and new blood has been taken into the reorganized Canada Cabinet Company of Gananoque, who, it is expected, will resume operations on a larger scale than ever before. Messrs. Chas. Macdonald, W. T. Sampson, W. J. Gibson and E. L. Atkinson, all well known locally, will be directors of the new company. Their capital will be $100,000.

The charter of the New Brunswick Gas and Power Company has been purchased by Boston capitalists, who will introduce what is known as the Century light into that province. An effort will be made to amalgamate a number of smaller gas companies operating in different districts. The head office will be in St. John.

The newly-organized Canada Car Company of Montreal has concluded to contract with the Grand Trunk Pacific Railway Company under which they are required to deliver fifteen cars a day for five years, dilivery to commence as soon as the plant is completed. This will mean a total of nearly twenty-four thousand cars.

Cement from slag, supplied by the Dominion Iron and Steel Company will soon be manufactured in Sydney, English capitalists, represented by Mr. Maddocks, and Mr. A. C. Ross, a local solicitor, are behind the project. The company secured its charter some time ago. Its authorized capital is $100,000.

Leamington, Ont., is to have a basket factory. A number of local men, including E. Smith, W. T. Easton, and E. M. Easton, have secured incorporation under the name of The Erie Basket Company, Limited, with a capital of $20,000. They will make all kinds of baskets, and fruit and vegetable packages.

Satisfactory progress is being made with the hydraulic development on the Wahnapitae River, near Sudbury, Ont., and it is expected that power will be delivered by next spring. The town of Sudbury and the Mond Nickel Company will be the principal consumers.

The Moyie Lumber & Milling Co., Ltd., announce their intention of closing up their mill until such time as the market in British Columbia is in better shape. Their entire stock of 4,000,000 ft. is now offered for sale.

Henceforth all paper boxes used in packing the goods of the Kingston Hosiery Co. will be manufactured on the premises, a complete equipment having been installed for that purpose.

Labor Column

COMMENTS ON THE SECOND ANNUAL CONVENTION OF THE CITIZENS' INDUSTRIAL ASSOCIATION.

The changes which have taken place during the past two years in the attitude of the United States people towards organized labor form an unusually interesting chapter of history. They follow not unnaturally, perhaps, the wonderful growth of organized labor bodies as combined in the American Federation of Labor. These have a strength to-day of about 1,750,000 members, as compared with 275,000 in 1898.

This remarkable growth of organized labor forces, under the management of radical leaders, produced extreme conditions which were not altogether unexpected,—but which have roused the American people to the fact that united national action is necessary if they are to preserve for their citizens the freedom of thought and action which has so long been their boast.

Accompanying such abuses as the boycott, the closed shops, and the restriction of output, the loss of life and property resulting from industrial strife during the past two years has been simply appalling—in fact the conditions have been such as to warrant the most serious consideration of the greatest minds in the Republic.

Rise of the Citizens.

To the National Association of Manufacturers fell the duty of leading the campaign against the methods employed by labor. This campaign was undertaken in no half hearted way. In D. M. Parry they found a leader with the necessary courage, and from State to State employers began to realize that organization and united action alone could save the country from an actual revolution.

The work of this great Association and its allied forces has been two-fold. It has first of all faced with open opposition the methods of organized labor, and has won many signal victories in stemming the tide of evil influence which was bringing with it such disastrous results for the whole nation. Its second function has been to educate the general public as to the true meaning of the tyranny exercised by organized labor. In connection with this latter work, the rise of the Citizens' Industrial Association of America is one of the outstanding features.

This Association is not confined to employers of labor. It is the central organization embracing Citizens Alliances' from every State and represents men in every calling and station who desire to improve the conditions and restore to American citizenship the rights and authority usurped by irresponsible organizations.

The second annual convention of this Association was held in New York on November 29th and 30th last, and was attended by representatives from every State in the Union and from the Dominion of Canada.

The Issues.

The key-note of the Convention was the preservation of free citizenship. "The Closed Shop" was the centre of attack. The right to work is as necessary and as sacred to man as the right to breathe, yet in the closed shop this right is made conditional upon union with certain organizations who attempt to hold within their grasp the workingmen of the country. It was boldly declared that any such attempt to control labor is a direct violation of the Declaration of Independence.

It was also stated that the general tendency of organized labor to control and restrict the output was destroying the honesty and stamina of the workingmen of the United States, many of whom were bound by their regulations to perform only a limited amount of work each day.

"The boycott" had been particularly offensive. It was shown to be an Anti-American institution, and a deadly enemy of industrial liberty. More than that, it was found to be a violation of the Sherman Anti-Trust Act, and as such an unlawful and criminal combination.

The Addresses.

Many noted leaders of labor reform were present at the Convention. Mr. D. M. Parry presided. Other notable figures were Daniel Davenport, of Bridgeport; John Kirby, of Dayton; C. W. Post, of Battle Creek; J. W. Van Cleave, of St. Louis; Jas. A. Emery, of San Francisco and Chas. N. Chadwick, of Brooklyn.

The feature of the Convention was a series of addresses on the various problems presented in the industrial conflict. These addresses were remarkable, not only for their eloquence, but for their broad national spirit, and their unpatronizing yet reasonable consideration of the interests of the workingman.

Mr. Davenport dealt specially with the work of the American Anti-Boycott Association, of which he is the Executive Agent. In the case of the boycott against the hat manufacturers he gave details of successful suits against 250 members of the United Hatters Union in the State of Connecticut. In these suits, the property of the individual defendants was attached to an amount aggregating $180,000.

The paper dealing with the apprenticeship question presented by Mr. Chadwick was peculiarly able and thorough. In the early days of organized labor, the unions existed not merely to secure better wages but better workmanship. To-day young men found access to their trades with difficulty, and were influenced by organized method to dwarf their honest efforts, and resist progressive methods. He was doubtful if the ground lost could ever be regained.

The most striking address of the Convention was delivered by Mr. Emery. He described in detail the deplorable conditions which had existed in California before the organization of Citizens' Alliances. The employers were now more thoroughly organized than the unions, and the result had brought about a mighty reaction, and an almost complete reversal of former things. Unionism had been carried so far in San Francisco that a serious strike was brought on in a large establishment because a partition was erected there by a contractor, one of whose men bought a saw from a hardware merchant whose son patronized a non-union laundry. Organization and the consequent maintaining of equilibrium was the only hope of the employer. Mr. Emery closed with a stirring appeal to the people of the United States to give their verdict through Citizens' Associations for a free and educated citizenship, asking "What shall it profit a nation if it gain the whole world, and lose its own soul?"

Conclusions.

The addresses showed, almost without exception, that a wonderful change had taken place during the past year in the attitude of the United States people towards organized labor. Strikes and their accompanying evils had led to investigation, and investigation had resulted in education. Lawlessness and crime were never reasonable, and public opinion had now begun to assert itself. It was noticeable that in Chicago the membership of labor bodies had decreased by nearly fifty per cent., and the most remarkable changes were taking place in those States which had been most completely unionized.

Altogether, the Convention was exceedingly interesting, indicating particularly the necessity of organization, and the splendid results following from an educational campaign showing the effect of union methods on the industrial life of the nation. The

work of the Citizens' Industrial Association should be followed with deep interest by Canadian employers.

The following officers were elected for the coming year:—D. M. Parry, of Indianapolis, President, re-elected; J. C. Craig, Denver, Col., First Vice-President; James T. Hoile, of Brooklyn, Second Vice-President; George A. Davis, Grand Rapids, Mich., Third Vice-President; Major A. C. Rosencranz, Evansville, Ind.

STRIKE OF THE WINNIPEG PLASTERERS.

Attempt to Settle Differences of Rival Unions by a Blow at The Employer.

In the hands of the laboring man the strike is a weapon to be used indiscriminately against the employer, the fellow employee or any one else happening to incur the displeasure of the union. Modern science has long since exploded the theory of universal remedies, but to the workman the strike is still the panacea for all his troubles.

On December 10th Winnipeg plasterers to the number of thirteen, who were employed on the new C.P.R. offices and hotel, laid down their tools as a protest against the employment of outside plasterers who refused to join the union. The men to whose presence they objected had been brought to the city some weeks before from Montreal. Being members in good standing of a Montreal union, it was naturally thought that they would be willing to become members of the local order. An invitation to join was accordingly extended to them. On its being rejected a second proposition was made to the visitors whereby they were to be admitted to the union upon payment of half the usual initiation fee. This offer was likewise declined, whereupon the union called off its men.

In a statement to the press, the Secretary of the Winnipeg union said that they had no quarrel with the building contractor, but only with the Montreal plasterers who refused to join them. To compel these men to join the union, rather than to secure their discharge, seems therefore to have been the object of the strike. In the pursuit of this object, injury was wilfully inflicted upon one who, by their own confession, had done nothing to offend. The employer was driven into a corner and crippled in hopes that, through threats of discharge, he would force his workmen to become members of the union.

Tactics of this sort cannot but lose for the labor unions the sympathy and respect of the community at large. When the employer has acted throughout in perfectly good faith with the union, and stands ready to give employment to all its members who apply to him for work, he certainly deserves better treatment at its hands. From the non-union workman's point of view their policy is equally objectionable. A man who refuses to join a union after being invited to do so, must have good and sufficient reasons for his action. He believes that his best interests will be served by holding himself free from such affiliations. In rejecting the offer of the union he has committed no crime against society. Why then should he be prevented from earning an honest livelihood at his trade? Why should he be forced, under pain of losing his job, to do that which his own good judgment tells him he should not do? If pressure of this sort is going to be brought to bear, it can only react to the detriment of the unions themselves, and the sooner they awaken to a realization of this fact the better.

COMPETITION OF UNIONS.

Western Miners Divided Between Two Great Organizations.

Early in December a representative of the United Mineworkers of America visited Nanaimo, B.C., where he succeeded in organizing a local union of the body. There is also a union of the Western Federation of Miners in Nanaimo, so that that city has the distinction of being one of the battle-grounds, of which there are many west of the Rocky Mountains, where the great rival organizations are working out the problem of the survival of the fittest. The enthusiasm which marked the organization of the local union referred to seems to point to the question being settled so far as Nanaimo is concerned, in favor of the great brotherhood of which John Mitchell is the head.

The Western Federation of Miners appears to be losing ground in British Columbia. Large numbers were originally induced to join in the expectation that they would receive financial aid in time of trouble. In the action for damages brought by the Centre Star Gold Mining Company against the Rossland Union the information was elicited that the Western Federation of Miners had forwarded large sums of money from Denver to aid in prosecuting the strike. But the money then supplied seems to have been the total appropriation for British Columbia for some years to come, if one is to judge by the parsimonious attitude of the Executive towards further applications for assistance received from that quarter. The experience of the men of Ladysmith and Cumberland during the strikes there has taught them that little or nothing in the way of help is to be had from the headquarters of the union, and the moral effect of such treatment is likely to weigh heavily against the Federation in the coming struggle.

ALIEN LABOR PROSECUTION.

Moore Printing Company Charged with Soliciting Importation of Aliens—Case Dismissed.

Reference was made in the last issue of INDUSTRIAL CANADA to a strike at the shop of the Moore Printing Company, Winnipeg, which resulted from a member of the firm, not a union man, undertaking to operate a monotype machine on his own premises. In view of the unreasonable attitude of the union, the company declared its intention of running an open shop, and without much difficulty workmen were found to take the place of the strikers.

As a sequel to this strike an information was sworn out by one of the former employees, charging the Moore Printing Company with a breach of the Alien Labor Act. At the trial certain letters and telegrams were produced which had passed between the company and the officers of the Typothetae, in which help was asked for by the one party and that help promised by the other party. The evidence, however, was insufficient to prove that the defendant company had brought under contract the two men in whom the charge centered, and the case was dismissed.

Later on a second information was laid on a broader basis than the first, charging the company with knowingly encouraging and soliciting the importation of aliens and foreigners into Canada to perform services under contract or agreement with such aliens previous to their becoming residents in or citizens of Canada. In the trial which followed the defence established the fact that at the time of the strike it was impossible to procure men in Winnipeg capable of operating the new machine. The magistrate, in summing up said that he could do nothing but dismiss the case as no names had been mentioned in the information.

ONE BILLION LOST IN STRIKES IN TWENTY YEARS.

The statistics on the subject, says the Elyria, Ohio, *Chronicle*, show a loss to the United States from strikes that is simply appalling. We, who are so familiar with the word "strike" that we scarcely give it a second glance while reading our papers, have not the slightest conception of the vast amount of money that has been lost through labor disturbances.

Available figures show that in the twenty years between 1881 and 1900 there were 22,793 strikes, which cost the country in wages, expenses and direct loss of trade the enormous sum of $396,769,292! During the same period there were 1,005 lockouts, costing $72,199,189, making a total of $468,968,581!

Here is a loss of almost half a billion dollars figured from three items only—that is, loss of wages, assistance, or money advanced to strikers by their sympathizers, and loss to employers. It would be a fair computation to estimate an equal sum lost directly and indirectly by the general public because of the strikes.

Total, one billion dollars in twenty years!

Among the Industries

THE MANUFACTURERS OF CANADA.

Of all the men who have been identified with the industrial development of British Columbia, none is more widely known or more justly popular that Mr. John Hendry.

Born on a farm in the Province of New Brunswick, Mr. Hendry has been accustomed all his life to hard knocks in the rough school of experience. After a course in the district public school he served his apprenticeship with his father in the milling business. The grist mill, however, possessed few attractions for the young man, who turned his attention at an early age to saw milling.

In 1868 he made a long trip through the Western States, reaching St. Paul by the Mississippi steamer before the railroad had penetrated to that enterprising city. For a short time he worked in the mechanical department of the Northern Pacific, but finally decided to continue his journey further West, ultimately arriving in British Columbia by way of San Francisco.



No. 9. JOHN HENDRY.

Those were the days when the lumbering industry of the Pacific Coast was in its infancy. Operations, however, were conducted on a fairly large scale in Washington, and here for a year and a half Mr. Hendry served as milling engineer under one McNair, an expert on logging and the judging of timber.

In 1875, after a short sojourn in Manitoba, he returned to British Columbia, where he entered into partnership with Mr. McNair in the lumber business. Their first plant, known as the Royal City Planing Mills, was established at New Westminster, but on the advent of the C.P.R. to Vancouver a much larger mill and factory was erected in that city. Later they formed the British Columbia Mills Timber and Trading Co., which now ranks among the most important industrial concerns on the Pacific Coast.

Of this company Mr. Hendry is President and General Manager. They control immense timber limits and operate three distinct plants, having bought out the Hastings Saw Mill Company and the Moodyville Saw Mill Company with all their accessories. For their logging operations they have had to build twenty miles of railroad, on which they use four large locomotives and twenty hauling engines. Twenty-five hundred hands are on their monthly pay-roll. Their export trade has grown to enormous proportions, and they are now the largest foreign shippers in the province. Recently they have added to their business a large plant for the manufacture of portable houses, which are in great demand through Manitoba and the West.

Mr. Hendry is connected with several railroads, and is President of the Vancouver, Westminster and Yukon Railway Company, whose line when completed will be 1,600 miles long. For years he has been an active member of the Boards of Trade in Vancouver and New Westminster, and has served both organizations in the capacity of President. In 1892 and again in 1900 he represented them at the Congress of Chambers of Commerce in London, and at the Congress in Montreal in 1903 he also represented the Canadian Manufacturers' Association as Vice-President for British Columbia, an office which he has held since 1901.

It would be difficult to enumerate all the public offices which Mr. Hendry has filled, suffice it to say that he has always given freely of both his time and his money to any movement tending to improve industrial conditions in the province of his adoption.

Messrs. Buckborough & Simpson have purchased from Watt Bros. the old Diamond Mills at Ridgetown, Ont. Hereafter the company will be known as the Ridgetown Milling Company.

The steady increase in the business of the J. S. Elliott & Son Co., Prescott, has made it necessary for them to build new quarters. They are now at work on a solid stone factory, 62x100 feet, three stories high. They are extensive manufacturers of cloth covered caskets, and as soon as their new building is completed they will turn out varnished coffins as well.

The Keewatin Flour Mills Co. have prepared plans for the construction and equipment of a first-class flour mill, with elevators, barrel factory, railway sidings, and all that is necessary to operate a mill of 5,000 barrels capacity. Tenders will be called for at an early date, and work begun in the spring.

The Canadian Pacific Railway Co. have placed an order with the Algoma Steel Co., through their sales agents,Drummond, McCall & Co., Montreal, for 25,000 tons of steel rails for prompt delivery. The order was given as the result of a favorable report made by Captain Hunt, a steel rail expert of Chicago, who after an examination stated that no better rails were manufactured anywhere in America.

Wetaskiwin, N.W.T., is extending its public school system, and Mr. J. S. Orr is asking for tenders up to February 1st next for 350 school desks.

The Wm. Davies Co., Limited, have taken over the plant of the Harriston Pork Packing Co. For some weeks past they have had about thirty men employed putting everything in first-class shape, preparatory to the commencement of operations early this month with a staff of between fifty and sixty men.

A large oil refinery is in prospect for Toronto. It will be built by The A. D. Gall Petroleum and Chemical Co., who are now looking for a site.

The Nichols Chemical Company of Canada, Limited, manufacturers of heavy chemicals, who have large works at Capelton, P.Q., have opened a head office in the Bank of Ottawa Building at Montreal. E. S. Pincott has been appointed manager.

The old Ross-McLaren mills at New Westminster, which have lain idle for fifteen years, are to be re-opened in the spring with a staff of 200 men.

The Accountancy Book Publishing Co., Ltd., is the name of a new concern that has recently been promoted by David Hoskins, W. B. Tindall and W. C. Eddis, of Toronto. They are empowered to purchase certain copyrights, to publish magazines relating to accountancy, and to engage in a general printing and stationery business. The share capital will be $40,000.

Letters of incorporation have been granted C. E. Safford, a Buffalo manufacturer, and others, under the name of the Steel Radiator Company, Limited, for the purpose of manufacturing radiators and heating apparatus. The head office will be in Toronto, and the capital stock is fixed at $500,000.

The Rider & Kitchener Co., Limited, of Lindsay, Ont., are adding to their present business of manufacturing veneers and excelsior a plant for making brush handles and blocks, also turned goods. The machinery has all been installed and will be put in operation almost immediately.

The Canadian Canoe Co., Limited, Peterboro', have moved into the building lately vacated by the Martin-Orme Piano Co., and now have one of the largest and best equipped factories in Canada for the manufacture of small pleasure craft. Their goods are sold in all parts of the Dominion, also in England, Australia and Germany. Since 1901 their business has doubled.

Mr. James Hunter, of Duluth, is endeavoring to interest Eastern capitalists in a scheme to develop the Atikokan iron range. It is proposed to tap the range by a spur from the Canadian Northern and to erect blast furnaces on the Neebing River between Port Arthur and Fort William. The Atikokan ore is very rich in iron, but carries a high percentage of sulphur.

Sir G. A. Drummond, E. S. Clouston and others of Montreal, have secured a Dominion charter under the name of The Electrical Flour Patents Co., Limited. They propose to acquire certain patents and to manufacture machinery under them. Their authorized capital will be $250,000.

The business of the John Murphy Co., Limited, Montreal, will be taken over on February 1st by the Robert Simpson Co., of Toronto, who will thus enter the retail field in Montreal under most favorable conditions. Mr. John Murphy will retire from business.

A Manitoba charter has been granted to Chandler & Fisher, Limited, who will take over the Western business of Chandler & Massey, Limited, Toronto, manufacturers and dealers in surgical and dental instruments, hospital supplies, etc.

T. H. Ayers and others, manufacturers of Lachute Mills, Que., have obtained a provincial charter under the name of the Chatham Pulp and Paper Co., authorizing them to manufacture pulp and paper and to carry on a general lumbering business. The capital stock is placed at $200,000.

The Canada Foundry Co. announce their intention of establishing in connection with their works a plant for the manufacture of steam shovels, pile drivers, wrecking appliances and other machinery necessary for railway work and dock and bridge construction.

The R. McDougall Co., Limited., Galt, have just completed the annual extension to their plant. They now have better facilities for manufacturing than ever before. Among the lines recently added to their output is a pipe cutting machine, which in the larger sizes formerly had to be imported, as it was not made in Canada. The workmanship on this article will be of the highest class, and all parts will be interchangeable.

The Peterborough Canoe Company shipped to Edmonton last month the hull of a steam yacht 66 feet long, which was built entirely of white oak. Every piece was carefully numbered so that the yacht could be set up without any trouble on its arrival. From Edmonton it will be carried by sleighs hundreds of miles inland to its ultimate destination.

Mr. J. H. Plummer is authority for the statement that the Dominion Iron and Steel Company will be turning out steel rails early in March. A double shift has been put on the rail mill with a view to its early completion.

A woollen factory is shortly to be established at St. Catharines. Two local men, James B. Dolan and Martin Jamieson, are the projectors. They are asking for certain concessions from the city, for which they agree to employ at least 70 hands the first year. They will manufacture knitted woollen underwear.

Application will be made at the next session of Parliament for an act to incorporate the North-West Telephone Co. with powers to construct and operate telephone lines throughout Ontario, Manitoba and the North-West. Mr. Hal. McGiverin, of Ottawa is acting for the applicants.

Mr. Philip N. Hamm, the well-known biscuit manuafcturer of St. John, proposes to move his factory to Moncton. He is asking of the latter city exemption from taxation and free water for a term of years. He will give empolyment to about fifteen hands.

C. A. Slater and W. F. Mulholland, are the prime movers in the establishment of the Unique Umbrella Company of Canada, Limited, who will carry on a general umbrella manufacturing business in the city of Toronto. The capital will be $40,000.

An amalgamation has been affected between The Canadian Glove Manufacturing Company and Langdon & Company, both of Toronto. Hereafter the business will be carried on under the name of The Toronto Glove and Tanning Co., Limited, with a working capital of $40,000.

An impetus has been given to the lobster canning business in Cape Breton by the formation of the H. E. Baker Co., Limited, who will begin active operations at once. Mr. Baker has been in this trade for a number of years, but has now associated with him some Halifax gentlemen who will lend the industry the financial assistance it is in need of. The new company has a a paid-up capital of $31,000.

The additions to the plant of the Edmonton Brewing and Malting Co., which have been under way for some time, are now completed. They consist of a malt house 85x35 feet, and a cold storage 30x40 feet. Both buildings are of solid brick and are laid out in accordance with the most modern principles.

The factory being erected by Matthew Bros., Limited, Toronto, is now nearly completed. An entire outfit of new machinery has been installed, much of which is of a design new to the manufacturers of moulding in Canada.

A company has been formed in Milverton, Ont., with a capital of $20,000, to engage in the manufacture of boots and shoes. A suitable building will be erected and from 25 to 50 men employed to start with. Chief among the stockholders are J. G. Grosch, George Grosch and Pfeffer Bros.

A four-story structure is being built at St. John, N.B., by the *Evening Times* of that city.

Negotiations are in progress between Mr. N. Thompson, of the Vancouver Drydock and Shipping Co. and some English capitalists, looking to the establishment of a large steel plant on the Pacific Coast. The ores from Taxeda Island, which entered largely into the construction of the hull of the U.S. battleship Oregon, are spoken of as affording the necessary supply of raw material.

The D. L. Burrell Company, manufacturers of dairy supplies, of Little Falls, N.Y., are looking for a suitable site for the establishment of a branch in Canada. They will probably locate in Brockville.

Engineers are at work upon plans to lower the level of Okanagan Lake in British Columbia to the extent of four feet. The main reason for the improvement is to afford relief to the town of Kelowna, which is flooded by high water every spring. It will be done by dredging the outlet connecting Okanagan Lake with Dog Lake, incidentally affording water transportation to a rapidly growing district.

A site has been selected in Montreal by The Wm. Davies Co. who purpose erecting there a large establishment similar to their present one in Toronto. Their invasion of the Montreal market will also be marked by the opening up of branch stores in various parts of the city.

Foreign Trade News

Agricultural Implements.

Argentina.—In an official brochure recently issued by the Argentine Ministry of Agriculture some figures are presented showing the imports of agricultural machinery and implements for the years 1902 and 1903. The market for this class of goods is steadily increasing in Argentina, and with their favorable climate and fertile soil an enormous expansion may confidently be looked for. From the following table, giving the value of imports in gold dollars, it will be seen that in one year the trade was almost doubled:—

	1902.	1903.
Ploughs	$711,724	$1,446,136
Shellers	66,466	111,018
Headers	163,665	378,960
Mowers	7,359	18,387
Rakes	25,248	95,560
Horse Rakes	26,626	65,060
Rakes of other class	1,769	3,119
Ploughshares	71,207	147,694
Harvesters	637,218	965,730
Seeders	83,071	170,910
Threshers	267,855	706,715
Total	$2,062,208	$4,109,289

Cement.

Philippine Islands.—One of the principal articles of importation into these islands just now is cement, and the business is well worth the serious consideration of the trade. Whereas in 1902 the total value of the cement imported was $65,000, during the first five months of this year the importation reached a value of $72,000. The bulk of it comes from Hong Kong, but Belgium, Germany and the United Kingdom also participate in this increasing trade. There are such a large number of public and other buildings now being erected in Manila and in some of the other towns of the Archipelago, that the demand for cement is likely to continue for some considerable time yet, and to develop very much. Manila is a very old-fashioned city, its streets being narrow, crooked, and badly arranged. The authorities are now strenuously doing all in their power to improve and beautify it in every way, their idea being to convert it into the finest city in the Far East. This work has been started in every quarter, and the place just now looks like a huge building site. Many important building contracts have been placed recently, including sea-walls, quays, etc., which will require thousands of barrels of cement in their construction. The majority of the Government orders for cement have been placed with the Hong Kong makers, whose specialty is the so-called "Green Island" cement. As the Hong Kong people also own a line of vessels, they are able to successfully compete against the European makes, and practically oust them from the market, although many private contracts still go to Europe.—*Belgian Consular Report.*

Cereals.

Martinique.—Canadian exporters of flour, peas and beans and white pine lumber ought to find in Martinique a good market for these articles. In 1903 the imports of flour were valued at £66,194, and the imports of peas and beans at £7,596. Practically the whole trade in the above is done with the United States of America. A certain proportion of the above mentioned articles are of Canadian origin, but being shipped via New York they are entered in the customs returns as imports from the United States. Canadian exporters can ship their goods via New York by the steamers of the Quebec Steamship Company and the Navigazione Generale Italiana.—*H. M. Consul, Martinique.*

Commercial Museum.

Chili.—According to *Berichten uber Handel und Industrie,* a permanent industrial exhibition has been established in Chili. Foreign as well as Chilian samples and models will be shown. The museum will be divided into five parts:—(1) A permanent exhibition of factory and industrial products; (2) a museum of industrial and art industrial models; (3) an exhibition of foreign products; (4) a museum of national raw products; (5) a library and space for periodical special exhibitions. The participation of foreign manufactures in the permanent exhibition will be decided by and by, when the different departments adopt a definite line of development. This is only a matter of a few months at most, since parts of the permanent buildings are already occupied. In these, there is, as yet, nothing on exhibition except agricultural machines, implements, etc., of Chilian manufacture, and these only in limited numbers.

Cotton Growing.

Egypt.—With reference to the above, the British Consul-General at Cairo has written the Foreign Office as follows:—"Although eventually it is probable that cotton cultivation on a somewhat larger scale will take place in the Sudan, it will not be possible for some time to come—that is to say, until railway communication has been improved and irrigation extended—to produce any quantity which will materially affect the world's supply.

"I may also mention that, in spite of the great extension of irrigation in Egypt, the cotton crop of the current year in Lower Egypt is likely to prove disappointing. I am informed that this is largely due to the ravages of the cotton-worm, and to the inveterate practice of over-watering adopted by many of the cultivators. What is now mainly required in Egypt is to improve the quality of the seed. I trust that it will be found possible to do something in this direction through the agency of the Agricultural Society, which is about to be reorganized and to receive an additional grant from the Egyptian Government."

Opportunities in the West Indies.

San Domingo.—One of the prominent business men of Puerto Plata has written the Association with regard to an interview which he had with the President of that republic. The development of their country, he states, is being retarded owing to one line of steamers having a monopoly of all the carrying trade. At present everything they require from outside has to be purchased from the United States, and everything they have to sell has to be sold to the United States. They would be extremely grateful if arrangements could be made for a steamship line between Canada and San Domingo. Canada could consume their products and supply many of their requirements, and this healthy competition would mean much to their struggling country.

One of the chief necessities of the island is light electric roads. It is a level country to work through, and plenty of water power is available, but the main difficulty so far has been to find capitalists willing to finance these schemes. For some years the country has been in a state of ferment, and investors have looked askance at the opportunities offered them in that field. Things are now beginning to steady down, however, and a more stable government is looked for.

Oriental Opportunities.

The London correspondent of the *Birmingham Daily Post* reports that several prominent engineering firms, believing that the opportunities presented by India, Persia, Siam, and the Far East are of more immediate value than those offered by South African enterprises, are devoting their attention to a larger extent than before to the East. Electric trams, punkhas, motor wagons, improved methods of lighting, artesian well machinery, and domestic conveniences are just now living problems in South Asia, and the field has been covered only to a slight extent. There is a constant demand for inexpensive plants which utilize the latest results of mechanical inventions. The doctrine of physical comfort as distinct from mere ostentation is being more absorbed by well-to-do natives and independent princes, but in all this class of enterprise Continental makers have the advantage or patience and aptitude, and they are reaping a full share of the results.—*U.S. Consul, Birmingham.*

Wind Motors.

China.—The usual number of circulars and catalogues have been received with letters of enquiry respecting all sorts of impossible articles of import, for which there is only a very limited or no demand at all here. There never can be any possible demand at this port for wool washing or wool sorting machinery, and there is little prospect of any great demand for vertical and horizontal engines or other expensive steam machinery. In one direction, however, that of wind motors, there might possibly be a chance. Water wheels are fairly common in China, but windmills are practically unknown, though China is by no means a windless country such as Burmah is in many parts. Simple wind motors costing little and easy to erect could well be used for many purposes where cheap power is required, especially for pumping and general irrigation work, and once introduced their simplicity and comparative cheapness would appeal to the native mind, and probably pave the way for the introduction of other machinery.—*H. M. Consul, Amoy.*

THE AUSTRALASIAN MARKET

Canada's Position In It

BY T. A. RUSSELL

The term "Australasia" is generally used to include the two sister colonies of Australia and New Zealand. It covers a region of magnificent distances. Australia itself is almost as large as the Dominion of Canada and is to some extent like the Dominion inasmuch as only the Southern fringe of this territory is to any large extent inhabited. Practically the whole population of Australia is distributed along the Eastern and Southern coast with a small sprinkling in the extreme West. The north of the country and the great central districts are practically uninhabited.

The population of the whole of Australia in under 4,000,000 people. New Zealand, which is generally regarded as adjoining Australia is a separate colony some 1,200 miles from Australia and requiring four days' trip on a steamer to reach its most convenient point. It has a population of about 800,000, practically the same as the population of our Maritime Provinces.

Industries,

The great industries of Australia are the following, ranged in order of their importance:

1st. Pastoral, including sheep and cattle.
2nd. Gold Mining.
3rd. Agricultural.
4th. Industrial and Commercial.

The pastoral industry has been the greatest source of wealth to Australia. Huge tracts of country have been leased out to holders called squatters who raise thousands of sheep in the vast interior country. These men have pastoral lands leased from the Government in tracts varying from 1,000 acres up to 3,000 acres, depending upon the proximity of the land to the settled agricultural districts.

During seasons when there is a fall of rain there is no more prosperous industry than the pastoral; huge flocks of sheep are reared with practically no expense and the wool shipped off at good prices.

Australia has proved itself particularly adapted for wool growing. The Merino sheep is the main stay, and since its introduction to Australia, the native species has increased the weight of wool clip per sheep and maintained the quality.

The greatest curse to the sheep farmer or squatter is the rabbit, and no tales as to the depredation of this animal are too extravagant.

The next greatest blight is the drought which is periodical in Australia sometimes lasting from one to six or seven seasons. This practically ruins thousands of squatters who were previously wealthy men. During the last drought which in some sections of the country lasted for six years, there was a decrease in the number of sheep pastured in Australia of 50,000,000. Of course the drought which ruins the sheep farmer often makes money for the agriculturalist on the coast, who is able to get higher prices for his fodder, as it is so urgently required for the preservation of the sheep in the stricken districts. The result is that while a drought may be said to cause business stagnation in Australia there are undoubtedly large sections of the country which benefit from the drought season. This explains the conflicting reports which are often received from Australia as to good or bad times, the view point of the writer being largely determined by the section of the country in which he resides or the class of people with whom he meets.

Perhaps it would be more correct to say that the period immediately succeeding a break-up of the drought is a period of duller times than the actual drought period. The pastoralist has practically no stock from which he can derive profit on the pasture now obtained and the farmer no longer is able to get high prices for the fodder from which he has been making a good profit for some years.

Gold Mining.

Gold mining rivals the pastoral industry in importance and in the value of its output. Australia is literally sown with gold. There is no state in the Commonwealth in which gold in paying quantities has not been found. The whole country has been prospected very carefully but even yet new fields are being continually opened up and finds of amazing richness exposed. Some of the largest and most famous nuggets of free gold found in the world have been taken from Australian mines. The industry has its ups and downs but there is no doubt but that for years to come the gold industry of Australia will be of immense importance.

Agricultural Industry.

The agricultural industry of Australia has been retarded on account of the granting of pastoral concessions covering large areas of the country and thus blocking the advancement of the farmer. All of the state legislatures at the present time are working with a view to improvement of the land laws so as to render possible a larger settlement in the agricultural districts. Generally speaking the farmer in Australia manages a larger farm than in Canada. In New South Wales the average farm is four square miles or 2,560 acres. In the interior the farmers are subject to the same conditions of drought as the pastoral industry, but the soil is so fertile that a farmer who gets one good season out of three can make as much money off

the land as the average Canadian farmer. The fertility of the soil is amazing and as it requires little working large profits are made. The farmers use multi-furrow ploughs, stripper harvesters and other labor-saving devices that are not used to the same extent in Canada.

The farmer in New Zealand is different; his holding is smaller, his cultivation more intense. He gets possibly 20 or 30 bushels to the acre where the Australian farmer gets only 8 or 10, but the expense of cultivation is so much greater that there are many who undertake to prove that the Australian farmer makes more money than his New Zealand competitor.

Industrial and Commercial.

Manufacturing has not developed to a large extent in Australia. There are practically no natural water powers from which power may be supplied. The market is limited and the distance is so great that it costs as much to lay down the manufactured goods of one state in the adjoining state as it does to import them from Liverpool or New York. In addition to this the extremely unsettled conditions resulting from the attitude of the labor party in Australia have rendered manufacturing too precarious. There are of course a number of industries especially suitable for local manufacture in which important industries have been developed but they are the exception rather than the rule.

Openings for Trade.

Australia is a great buying country. Immense warehouses have been erected in all the leading cities and tremendous stocks of goods are carried at every point. There are few local manufactories and practically everything in the nature of manufactured goods has to be imported. Consequently it is a market which in many lines of goods should be largely canvassed by the Canadian manufacturer. But he must recognize that competition is keen, in many lines of goods undoubtedly keener than it is in Canada. The number of firms selling seems to be out of proportion to the buying community to be served. The firm therefore that wishes to get a hold in the Australian market must recognize that they have to make a vigorous canvass for the business and be prepared either to serve the purchasing public better than existing firms do or offer an article lower in price.

Canadian Firms.

Unfortunately the reputation of Canadian business firms in Australia is poor. My long and intimate connection with the Manufacturers' Association led to my receiving scores of callers representing houses who had endeavored to do business with Canadian firms. In addition to this I met a great many through introductions from the Canadian Government agents. These men one after another had the same story to tell; they had written Canadian firms, who were advertising for foreign business, and could get no answers; others had sent out quotations so high that business was out of the question; others sent no prices but sent their catalogues; some sent prices without any advice as to discount and terms. Most of them quoted prices F.O.B. their own factory. The Australian does not know how much it takes to get the goods from that factory to a point like New York where freights are settled and this uncertainty prevents his buying.

One of the largest firms in Canada sent out samples to the amount of about $200 and sent out no prices, no invoice and no bill of lading. More frequently prices are quoted and no samples sent. Rarely does any firm, in shipping there, make out case content sheets to show what goods are in each particular case, and the importer is probably under the necessity of opening each individual case on the wharf before customs officers before he can receive delivery of them. These are the experiences which dozens of firms in Australia have had, as I found on discussing business personally with them. This has disgusted them with trade with Canada; they do not want to deal with firms who do not know how to conduct their business. They are willing to deal with Canada and will give her a preference over competitors in the United States or Germany but when they are being very well served by the firms with whom they have had long and intimate connection they will not change to take up business relations with firms whose reputation is made by business methods such as have been described. It is unfortunate that this condition of affairs exists because there is a splendid market in Australia for many lines of Canadian produce and the application of ordinary business methods will obtain a fair proportion of it.

Firms should always attend promptly to correspondence. It is useless for them to quote high prices in a market where they have to meet the competition of the world. Prices should be made explicit showing all discounts and terms; they should be quoted either at a landed price or F.O.B. seaport price. Where possible samples should be sent out and if the trade is being taken up seriously duplicate samples to each of the important ports.

In shipping, duplicate copies of invoices should always go forward, second mail copies of correspondence, and case content sheets showing the contents of each case of goods shipped.

Attention to a few details of this kind would soon help to retrieve Canada's reputation.

Re Preferential Tariff.

We have now a Preferential Tariff in New Zealand and already it has begun to show beneficial results through increased sale of many lines of our products. In Australia the question of preferential tariff is hardly a live issue although it may become so at any moment. The instability of the various State Governments and of the Federal Government has rendered impossible the taking up of such a large question.

Other local issues such as are raised by the labor party, the selection of the capital site, settlement of the land question, the bringing into harmony of the various parts of the Commonwealth are all before the people at the present time in a way that has kept the question of preferential tariff in the background. These questions, however, are being gradually worked out and as soon as a strong Federal Government is formed preferential trade issues will come more to the front.

In the meantime Canadian firms should be preparing to reap the benefit from the adoption of such a policy when it is brought into effect.

Re Means of Communication.

There are at present two lines of mail communication with Australia and New Zealand; these are the lines of steamers running from Vancouver in conjunction with the Canadian Pacific system, and the Oceanic Steamship Co., operating from San Francisco. The former has a four-weekly service, the latter a three-weekly. It is my opinion that the interests of Canada would be better served at the present time if the Canadian steamers made one of the New Zealand ports a port of call rather than Brisbane. It would enable our firms to take further advantage of the preferential tariff in our favor in New Zealand. What is urgently needed, however, for the development of Canadian business is a good line of freight steamers from the Eastern Canadian ports.

The Manufacturers' Association should continue to canvass this subject with a view to ascertaining if there is not a sufficient volume of freight offering to justify the operation of a Canadian line of freight steamers from our Eastern Canadian ports to Australia and New Zealand.

There are many other points of first importance in connection with the development of a business in Australia but it is necessary that this article should be kept down to reasonable proportions, and I shall only add that I found our Canadian Government representatives in Australia, Mr. J. S. Larke in Sydney and Mr. D. H. Ross in Melbourne, of the greatest assistance to me and I am convinced that any firm seriously contemplating business in that country can receive a great deal of useful information by application to them.

TRADE ENQUIRIES.

185 **Agencies—Liege, Belgium**—A general commission agent in above place is desirous of making Canadian connections.

186 **Mexico**—A gentleman who has had considerable experience in Mexico and has lately been managing an important concern in Chicago is about to return to Mexico to represent his company there and is in a position to accept additional agencies. He mentions such articles as **paints, hardware, harness and saddlery, cotton goods, news and book papers, whisks, etc.**

187 **Apples**—Inquiry is made for the names of growers of **apples** in Canada requiring representation in England.

188 **Biscuits, Butter, Milk, Cheese, Flour, Shirts, Beer, Tinned Meats, Toilet Soaps.**—A company in **Kingston, Jamaica,** who act as agents for English and United States manufacturers and have been established in the wholesale business since 1897, desire to purchase or to obtain the agency for the lines above mentioned. If goods are purchased, payment will be made on 30 days' draft Bank of Nova Scotia. Several references are forwarded, some of which are known to the Association.

189 **Boards (Piano Key)**—The above are wanted by a **Paris** correspondent in 1,000, 2,000 and 5,000 lots. Quotations asked for f.o.b. Paris, payment to be made on receipt of goods. Five references are forwarded.

190 **Book Leather, Paper and Cloth, Manila Paper, Envelopes, Letter Files, Card Systems and Cabinets, Loose Leaf Devices, Metal Mounts for Covers, Machinery for Punching and Creasing**—A firm established for 44 years in **Auckland, N.Z.,** who carry on business of account book manufacturers, paper rulers, commercial and law stationers, etc., desire to communicate with Canadians prepared to supply supply the above lines.

191 **Boot and Shoe Supplies (such as Polishes, Lasts, Laces, etc., Leather and Rubber Heels)**—A manufacturer's agent in **Dudley, England,** who does business with both the wholesale and retail trade, desires to represent Canadian shippers in the above lines.

192 **Butter, Boxes**—The names of a few good Canadian firms exporting butter boxes are asked for by a **Belfast** house buying large quantities.

193 **Butter**—A **Dutch** firm of importers and manufacturers are desirous of getting into touch with leading butter exporters in Canada.

194 **Canned Goods**—A travelling representative of an **English** firm desires to get into communication with a Canadian canned goods house open to appoint an agent for the sale of their commodities in Great Britain.

195 **Cereals, Lumber, Minerals, Furs**—An **Austrian** house desires to correspond with Canadian exporters of the above.

196 **Cheese, Butter and Bacon**—A produce broker and agent in **England** is endeavoring to establish a connection with one or two first-class Canadian cheese, butter and bacon shippers who can offer large lots for placing on the English market.

197 **Chromate of Iron**—Inquiry has been received from **England** respecting supplies of chromate of iron from Canada.

198 **Clips (Metal)**—A supply house in **Toronto** desires to procure metal clips used for holding in place small articles in windows or show cases for display purposes.

199 **Desks (Roll Top)**—A Canadian in **London, England,** and already representing an important firm in a different line, desires to procure export prices for the above.

200 **Electrical Tramway Equipment, Building Hardware, Light Farm and Garden Tools, Wood Screws, Enamelled Baths, Taps, Lavatories, etc., Carpenters' and Joiners' Tools, Woodenware (such as Broom Handles, Tool Handles, Wash Boards, Clothes Pegs, Closet Seats, Wheels and Wheel-parts**—A correspondent with offices and show rooms in **London** and offices in **Manchester** and **Glasgow,** who has an established business as a hardware manufacturers' agent is now on his way to Canada to make connections with Canadian shippers in the lines above mentioned and goods of a similar nature. He is in a good position to handle such business and acts as a direct representative for shippers doing business direct in the name of the firm. He receives remuneration on a commission basis. He has been established since 1884 and has experienced salesmen visiting all parts of the United Kingdom every few weeks. This correspondent is well recommended and has forwarded several references. He will be in Canada shortly.

201 **Forks (Hay), Rakes, Scythe, Snaths, Handles, etc.**—A **New York** export commission house who sells the above goods to foreign countries desires to get in touch with Canadian exporters in a position to supply the same.

202 **Frames (Mattress)**—A correspondent in **King Williamstown, South Africa,** asks for quotations on from 500 to 1,000 mattress frames made from pine and cut to sizes. This correspondent is also prepared to accept agencies for Canadian manufacturers and sends several references. He has had 14 years' experience as traveller and manager of the business in South Africa.

203 **Fruits (Evaporated), Marmalade, Biscuit, Canned Meats, Nickle Ore, etc.**—A correspondent in **Vienna, Austria,** desires to secure an agency in any of the above lines for Austria-Hungary, Switzerland and Germany. If prices are satisfactory he will be willing to purchase on his own account. References are forwarded.

204 **Guts (Ox, Sheep and Pig)**—A **Liverpool** correspondent carrying on the business of a wholesale casing merchant desires to purchase against Bill of Lading the above. Quotations are asked f.o.b. Liverpool. A bank is forwarded as a reference.

205 **Handles (Fork)**—A correspondent in **Paris,** handling United States agricultural implements desires to procure fork handles. He has imported large quantities from the United States but as yet has done no business in Canada. He asks quotations f.o.b. Steamer France.

206 **Hay**—An **English** dealer in hay wishes to be placed in communication with Canadian exporters with a view to taking a few trial shipments.

207 **Leather**—A correspondent in **Georgetown, Demarara,** has forwarded samples of chrome bellies and asks for export prices for goods of a similar quality.

208 **Leather (Sole and Upper) Ale and Beer, Biscuits, Advertising Novelties, Apples, Paper Boxes, Tissue Paper**—A wholesale and retail druggist and general commission merchant, in **Port of Spain, Trinidad,** desires to communicate with shippers of the above lines. He has been established since 1896. He sends several references.

209 **Lumber**—A gentleman in **London, England,** who has visited Canada at different times and has had experience in the lumber trade, intends settling in South Africa in the near future and desires to represent Canadian manufacturers of lumber and other lines.

210 **Lumber, Canned Goods, Leather, Galvanized Iron Pipe, Chemical Products, Paints**—An agency firm in **Buenos Aires, Argentine Republic,** referred to us by responsible parties in that city desires to represent Canadian shippers in the above lines. They are already handling large quantities of these goods throughout Europe. They do business with the wholesale trade in Buenos Aires and also in the interior. They sell direct for shippers account. Goods will be paid for according to arrangements either in Buenos Aires or New York. They forward references from France England, Italy, Belgium, United States, etc. These will be provided on request.

211 **Machinery (Electrical)**—An **English** firm of electrical engineers and contractors have asked to be placed in touch with electrical firms in Canada with the object of introducing their machinery.

212 **Machinery (Electrical and other), Pumps, Steam Engines, Suction Gas Producers, Steam and Hot Water Boilers, Radiators, Sanitary Goods**—A Company in **Madrid, Spain,** importing United States manufactures and products, desires to communicate with Canadian shippers of the above lines. They state that there should be good business as United States is not treated as favorably in tariff matters as Canada. Catalogues with export discounts are requested.

213 **Machinery (Hardware), Bolts and Nuts, Book Binders' Machinery, Blacksmith Drills, Grain Cleaning Machinery, Grinding and Polishing Machinery, Tanning Machinery, Wood working Machinery and General Hardware Goods**—A merchant in **Mayaneram, South India,** asks for export quotations together with price lists and samples where possible, in the above lines. If same are satisfactory, payments will be arranged. One-third value of order in advance and balance against delivery at sight of shipping documents.

214 **Machinery (Woodworking), Automatic Lathes, etc.**—A firm in **Malaga, Spain,** asks for catalogues with export prices and commissions in the above lines.

215 **Minerals**—A **London** firm of chemists and mineral dealers are open to act as agents for Canadian mines with a view to disposing of minerals in England and on the Continent preferably through principals only.

216 **Moulds (Soap)**—A correspondent in **Quebec** desires to get in touch with a manufacturer of soap moulds for laundry and toilet soaps.

217 **Pegs (Shoe)**—An export house in **New York** asks for the names and prices of Canadian manufacturers of wood shoe pegs.

218 **Pianos, Boots and Shoes, Gluten Feed, Oil Cake, Linseed Oil, Flour and Grain, Lumber**—A commission agent in **Copenhagen, Denmark,** who has just started in this line of business desires to secure the agency of the different lines of goods mentioned for the Scandinavian countries. He is a young man and has had experience with the large importing houses in Denmark. He forwards five references.

219 **Plates (Tin and Black,) etc.**—We have been asked to recommend some Canadian manufacturers' agent who would represent a Welsh exporter in the above lines.

220 **Plugs**—A sample plug is forwarded from **London, England,** and quotations are asked packed in barrels of from 3,000 to 4,000.

221 **Rollers (Blind)**—Inquiry is made from **England** for the best makers in Canada of blind rollers, 4 ft. x 1 in. with laths or slats, packed in good cases of six dozen, delivered London.

222 **Skeletons (Mitten)**—A Canadian firm desires to get in touch with manufacturers of the above.

Shives—Inquiry is made for large quantities of Canadian pressed wooden shives for delivery in **London.**

224 **Soft Goods (viz., Clothing, Wearing Apparel, etc.), Plated Goods**—A manufacturers' representative in **Adelaide,** who comes well recommended to the Association desires to procure an agency in the above lines.

225 **Water Works Supplies and Hydraulic Pumps**—An important enquiry has been received from the **Island of San Domingo** where water works and electrical development are being started on a large scale. The enquiry asks for catalogues of all kinds of water works supplies, including hydraulic pumps. The enquirer states that there is a great deal of water power available for development on the Island.

226 **Wheels (for Carriages and Carts), Wood Spokes, Naves (Plain and Mortised), Horse Nails, Builders' Hardware, Overmantles**—A merchant and manufacturers' agent in **Brighton, England,** desires to represent Canadian shippers of the above in the English market.

SCIENTIFIC NOTES.

Artificial Silk in Mexico.

A recent issue of *El Economista Mexicano* contains a short article with reference to the manufacture of artificial silk, which is shortly to be commenced in the city of Mexico.

Properly speaking, the silk should be called vegetable silk and not artificial silk. Its ingredients are cotton and collodion. The cotton when placed in a solution of collodion is completely dissolved. The resulting mixture, or combination, is placed in a tank and allowed to remain until fermentation begins. From the tank the liquid passes through a certain number of glass or celluloid tubes, which are united in a tower 120 to 150 feet high. The lower ends of the tubes are perforated and the solution escapes through the small openings in the form of a fine yarn, which dries as soon as it comes into contact with the air. The resulting product is called artificial silk. Several spindles placed below the tubes catch the threads as they come out, and each spindle spins three of the fine threads into a single thread sufficiently strong for industrial purposes. Taken alone the fine yarns would be too weak for the purpose to which yarns are put. By means of certain dyes the product may be made noninflammable. Spinning such silk is not so much of a problem as how to weave it. Up to the present time it has not been practicable to use vegetable silk alone; it has been necessary to mix it with cotton and true silk.

The article concludes with a reference to the cost of vegetable silk. It can be sold in England at from one-fifth to one-fifteenth of the price of natural silk.

The Preservation of Wood.

The Chamber of Commerce Journal for December contains an interesting account of a new method for preserving wood, now being employed by The Powell Wood-Process Syndicate, Limited, 28 Fleet St., E.C., who recently gave a demonstration at the works at Carpenter's Road, Stratford.

It is claimed that by this process perfectly green, newly-felled timber can be rendered fit for ready use within a fortnight of being cut down. The method employed consists essentially in boiling the wood in a compound saccharine solution, which is slightly varied in character according to the quality of the wood under treatment. The timber, stacked on trucks in such a way that each piece is freely exposed to the liquid, is run into a large cylinder filled with the sugar solution, which is then brought to boiling-point by means of steam-heating. After the wood has been boiled for sufficient time to expel the latent air and coagulate the albumen of the sap, it is allowed to cool in the solution until properly impregnated. Finally the trucks are run into drying chambers, where it is dried by hot air at a considerable temperature.

Wood treated in this way is stated to be increased in density from 20 to 50 per cent., according to its character, and, its porosity being reduced, to be less liable to shrink, expand, warp, or split. At the same time its strength is increased, and it shows greater deflection before breaking and requires a greater strain for rupture than wood seasoned in the ordinary way. It is also claimed that the process is applicable to all sorts of timber, whether for railway sleepers or paving blocks or the finest cabinet work, that it prevents dry rot, and that it improves the appearance of many woods used for decorative purposes. As the plant is simple and inexpensive and the cost of the saccharine solution low, while the labor required is small, the cost of the whole process is said to compare most favorably with that of other methods of preserving and seasoning timber.

Concrete on the Farm.

Under the direction of the Secretary of Agriculture for the United States, a number of experiments have been undertaken during the past year with a view to determining whether or not a thoroughly practical concrete fence post, re-enforced with steel, could be made sufficiently cheap to be used by farmers. The advantages of such fence posts would be many. The price of

wood, particularly of the varieties used for fence posts, is continually rising, and even now the price is almost prohibitory in some sections of the country. Further, a properly constructed concrete post would be permanent, as it would neither rot nor undergo disintegration. A variety of methods of re-enforcement have been tried, and experiments are still being conducted. The results thus far are said to have been most satisfactory.

Experiments of a similar nature are about to be begun on methods for making concrete drains, watering troughs, roofs and barns, with the hope that concrete construction, so rapidly developing in the large cities, can be applied with benefit to the farm.

Straw Made Into Fuel.

An ingenious machine is now being manufactured under Canadian patents which promises in a large measure to solve the fuel problem for the farmers of the North-West. It is a simple looking affair, mounted on trucks, and can readily be drawn about from place to place. Part of its mechanism consists of a powerful compressor, which acts on the loose straw fed into it at one end, delivering it at the other in the form of hard straw-fuel and in ordinary cord wood lengths.

Coal in some parts of the prairie provinces sells at $12 a ton, and cordwood for $8 a cord. At these prices the question of fuel supply for a long winter becomes a very serious one, and if material which has heretofore been destroyed as waste can be converted into good fuel at comparatively trifling expense, it will mean a saving of thousands of dollars every year. The cost of treating straw with this machine is only about 50 cents per cord of straw-wood, and it is claimed that the fuel it produces will give out as much heat as the best maple or beech.

PAINTERS GUILTY OF CONSPIRACY.

St. Catharines Unionists Convicted of Conspiring to Derpive a Fellow-Workman of Employment.

More than usual interest attaches to the case of the three St. Catharines painters, who were tried on December 15th for conspiring to prevent one Albert Clay from following his regular occupation as a painter. A great deal of evidence was submitted, and the special jury who sat on the case brought in a verdict of guilty.

Clay, the plaintiff, had worked at his trade in St. Catharines for about seven years. In August last he made application for employment to the firm of Wm. Begy & Son, who informed him that he must first procure a permit from the union. This he succeeded in getting, but it was for a limited time only. In September his application for membership in the painters' union came up for consideration, and he was rejected.

Due notice of his rejection was sent to Begy & Son by the local secretary, who concluded his letter with the significant remark that the union would expect them to govern themselves accordingly. Hints were conveyed to the firm by the men that if Clay were allowed to continue on the job they would all quit. Men on other jobs, where the firm suggested sending him, also declared their intention to quit if obliged to work with Clay. Begy & Son needed more men and implored their employees to allow Clay to remain, but the union would not bend. No more union men could be had in the city, and though there was plenty of work and the firm needed Clay and were satisfied with him as a workman, they were not allowed to retain him.

The evidence of the employers as to Clay's competency was fully corroborated by others duly qualified to judge. The member of the union who signed his application papers swore that according to the constitution of the brotherhood he considered Clay a proper man to join their union.

In the meantime, Clay who was a married man, had to support his family by doing odd jobs at any kind of work he could obtain. The matter was finally brought to the attention of the Crown Attorney, and complaints were laid against the members of the union charging them with conspiracy.

After the verdict had been rendered, His Honor Judge Carman allowed the defendants to go until January 24th, when the sentence of the court will be passed. That the punishment will not be very severe was clearly intimated. No doubt, said His Honor, they had acted with more thoughtlessness than malice, and this would be a good lesson to their union. It would teach the members of unions that others had rights which must be respected as well as themselves, and he hoped that the next time a similar question came before them they would give a man fair play. In matters of this sort their own interest must not always be uppermost.

THE METRIC SYSTEM DEFENDED.

To the *Editor* INDUSTRIAL CANADA.

SIR:—

I shall be glad to be allowed to make one or two remarks on the discussion by the Commercial Intelligence Committee of the Canadian Manufacturers' Association on the Metric System, as reported in your Convention Number.

The main objects brought forward by speakers in that discussion to the compulsory adoption of the Metric System of Weights and Measures were the expense involved, and the difficulties likely to be experienced by the workmen and others in becoming accustomed to the change.

Of course these objections are perfectly legitimate, and have to be faced; but they are precisely those difficulties which must have occurred to every country which has adopted the system.

Every reform must be attended by some sacrifice, and to quote the words of Lt.-Col. Burland—"the great question is whether we would or would not get a corresponding value from small expenditure in each of our factories to induce this system."

Another speaker (Mr. Robb) admits that manufacturers may be driven to alter gauges and patterns as has been done in America, presumably from the stress of foreign competition.

It is quite possible that manufacturers may be compelled, one after the other, to adopt metric weights and measures for foreign trade, while keeping to the old system for their home trade, and a very unfortunate state of affairs that will be, and I submit that it would be far wiser to adopt the simple metric system, and so place ourselves in harmony with the majority of the civilized nations, rather than to continue the use of our present "farrago" of weights and measures as they have been called by Lord Kelvin.

It would appear from the remarks of another speaker (Mr. Tindall) that the idea is to have compulsory legislation to take effect immediately.

That, of course, is incorrect, and a certain time, not less than two years, will be allowed in order to familiarize the nation with the new system.

I cannot, moreover, acquiesce in the estimate by the same speaker of the difficulties that workmen would find in using the new measures, nor do I rate the intelligence of the Canadian artisan so low as to believe him incapable of doing what the German workman accomplished in 1870, and that, as Sir William Ramsey tells us, without difficulty.

I think, Sir, in a matter of this kind, that it is not wise to confine our attention solely to what it is likely to cost us in money or difficulty, as both may be exaggerated, and it serves a useful purpose to ask how other nations accomplished this same thing, and do they regret it?

I am, Sir, your obedient servant,

E. JOHNSON,

LONDON, E.C., 23rd November, 1904. *Secretary.*

A. B. Ormsby & Co., Ltd., Toronto, have built a spacious addition to the west of their present site. It is provided with large, expensive and up-to-date machinery for the manufacture of fire-proof windows. Many of the new buildings that have gone up in the burned district in Toronto are equipped with fire proofing material supplied by this firm.

TRADE PUBLICATIONS.

Sheet Metal Building Material.—One of the finest catalogues that has ever been added to our files is that of The Metallic Roofing Company of Canada, Ltd., which made its appearance about a month ago. It is a book of some 450 pages, printed on coated paper and substantially bound in cloth. It is profusely illustrated with cuts showing different designs of siding, ceiling, cornices, lathing, tiling, etc., and views of the more prominent public buildings in which Metallic Roofing Co. goods have been used. The publication is of Canadian workmanship and material throughout, and does credit to one of the largest manufacturers of sheet metal goods in Canada. The edition, we are informed, weighed about twenty-five tons and cost upwards of ten thousand dollars.

Shingle Mill Machinery.—The Wm. Hamilton Mfg. Co., Ltd., Peterboro, Ont., have issued an attractive booklet describing different kinds of machines used in the manufacture of shingles. This firm is already well known to the Canadian trade. Their machines have gained for themselves a reputation for durability and simplicity of operation, and have given excellent results wherever used.

Wire Cloth.—An advance copy has been received of the new wire cloth and perforated metal catalogue now being distributed by The B. Greening Wire Co., Ltd., Hamilton. It is one of the most complete catalogues in this line of business that we have ever seen, besides being a very creditable production as regards its general appearance. One valuable feature about it is the information it gives respecting the different methods of measuring wire cloth and screening. It also states the decimal size of the opening as well as the decimal size of the wire, an important point for those desiring to replace a screen or cloth by something of different weight and with the same opening. Catalogues covering other departments will be issued shortly, copies of which will be forwarded to those interested upon request.

Glue.—J. & G. Cox, Limited, proprietors of the well-known Gorgie Mills of Edinburgh, have issued an attractive brochure dealing with the manufacture of glue. While for the most part it is a description of the process as carried on at their works, it also reviews the progress that has been made in this important industry from the earliest time. It is elaborately illustrated and tastily designed, and may be read with interest by almost any one. Acknowledgments are due to the firm for extracts from their booklet which appeared in a previous issue of INDUSTRIAL CANADA.

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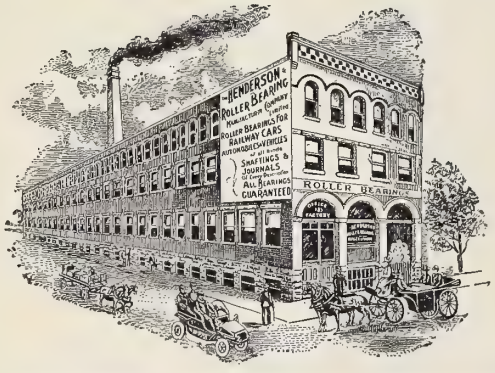
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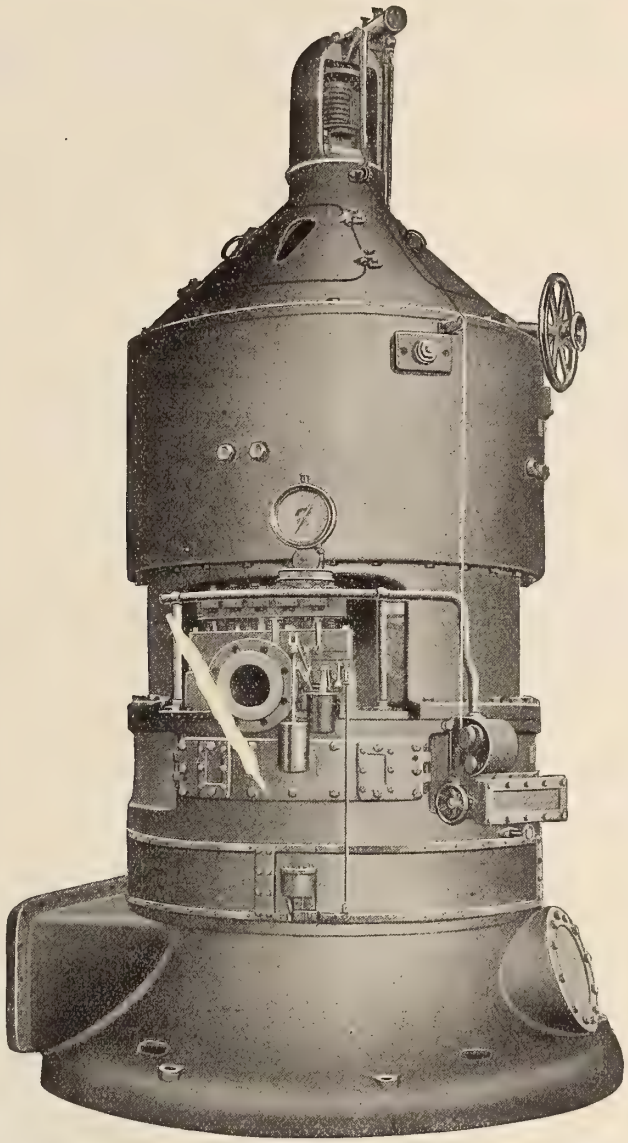
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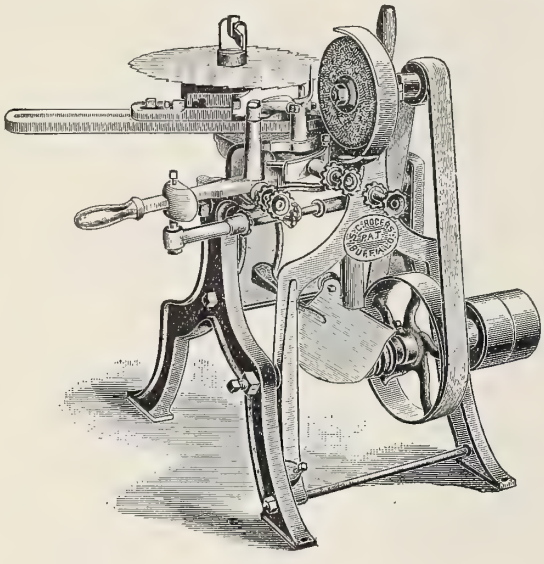
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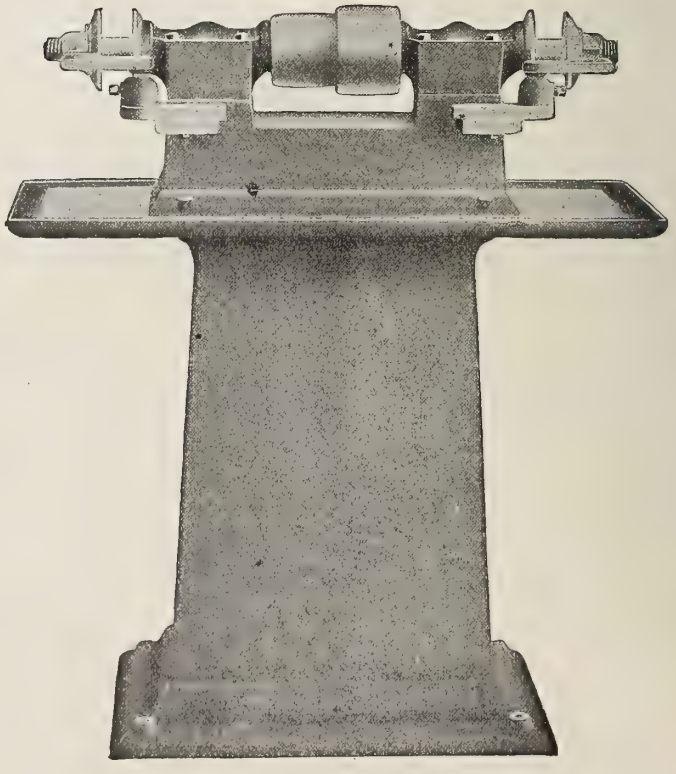
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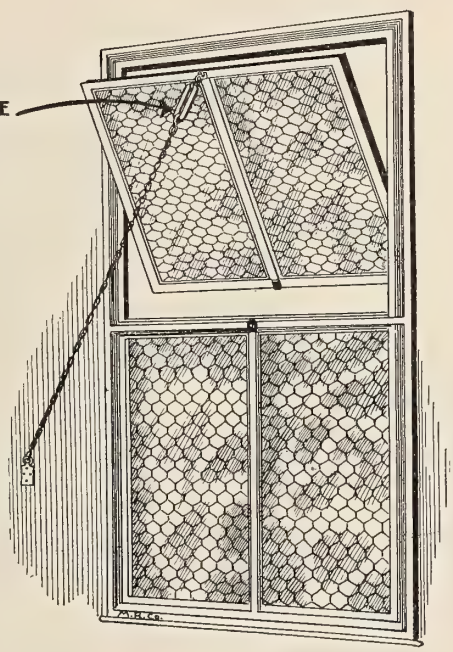
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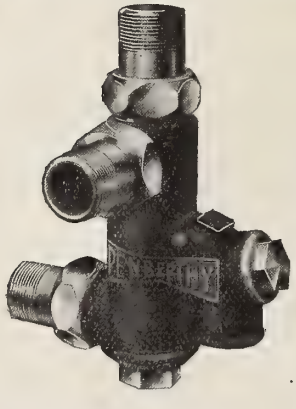


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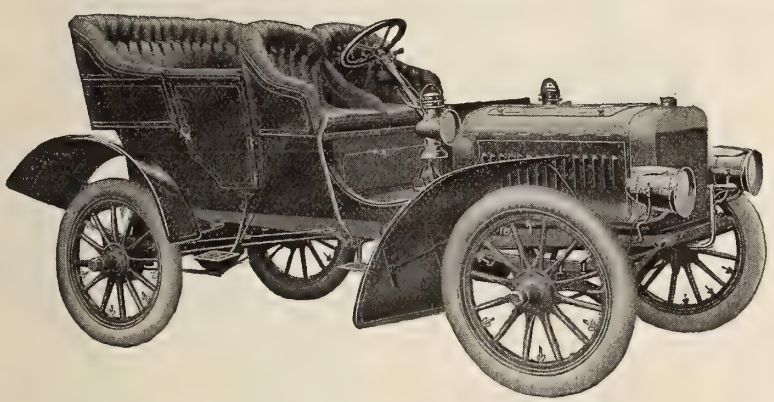
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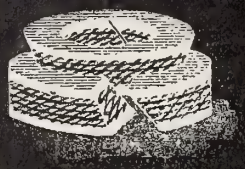
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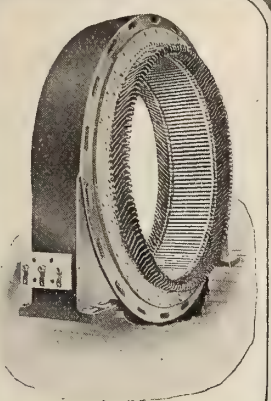
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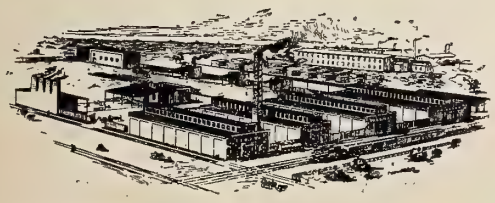
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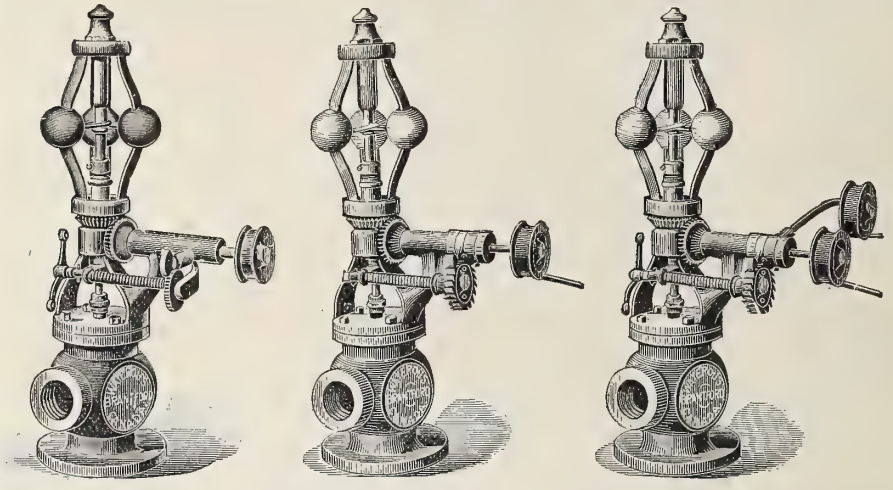
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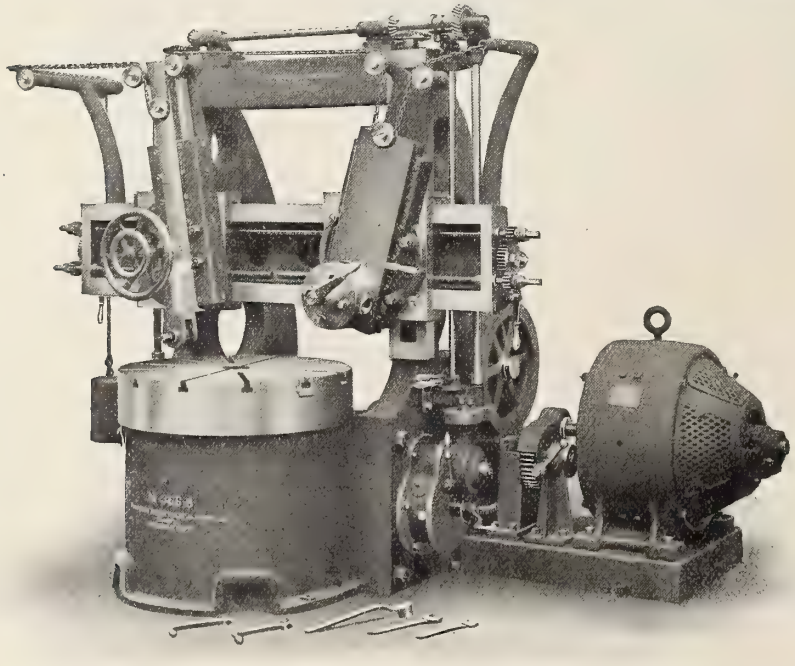
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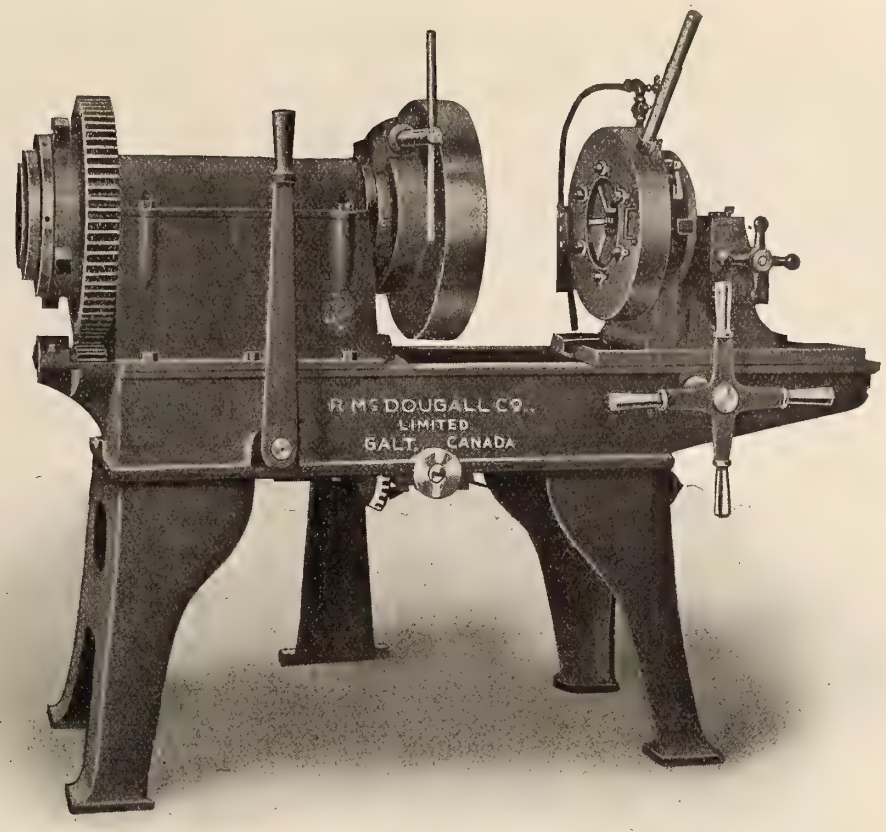
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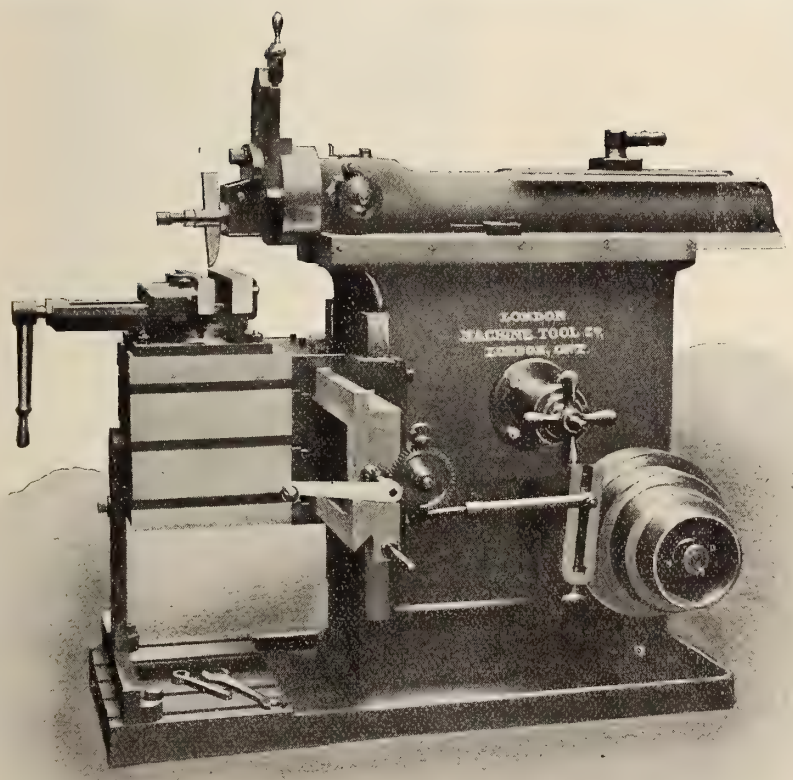
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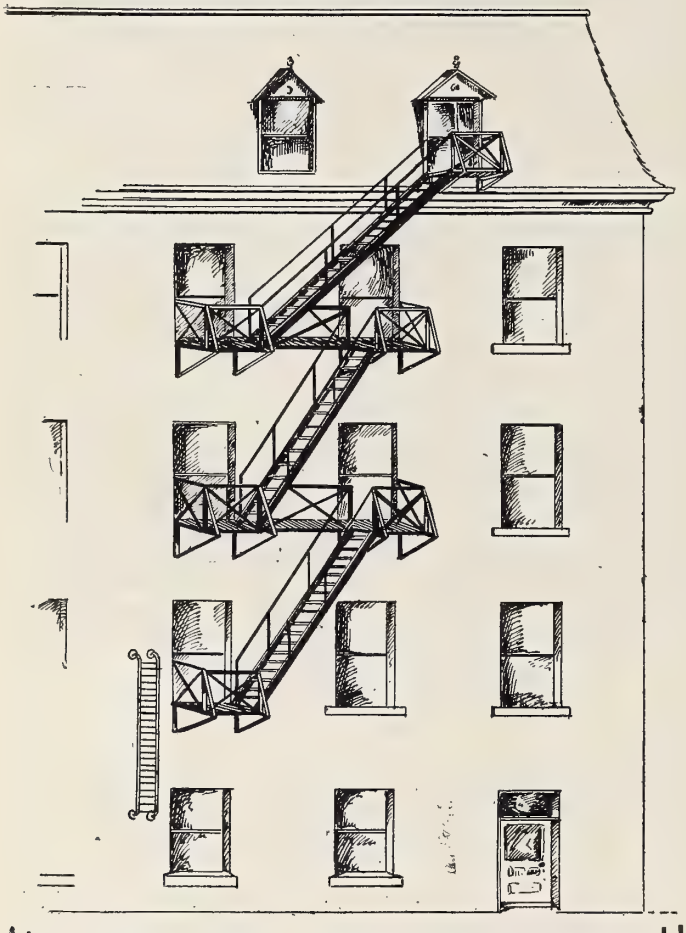
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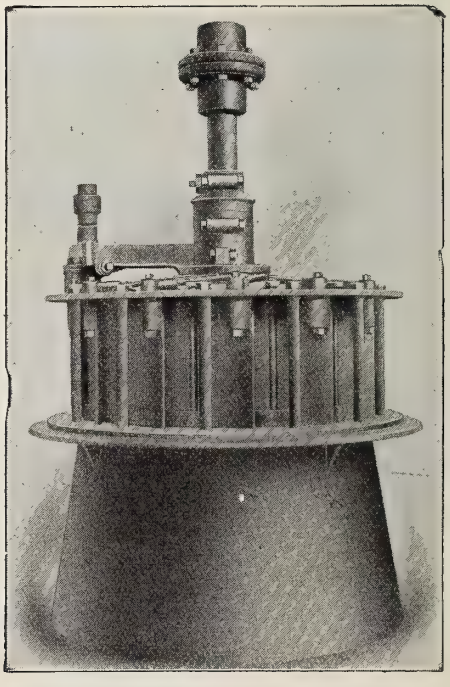
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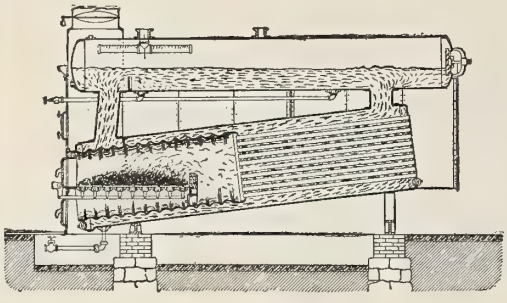
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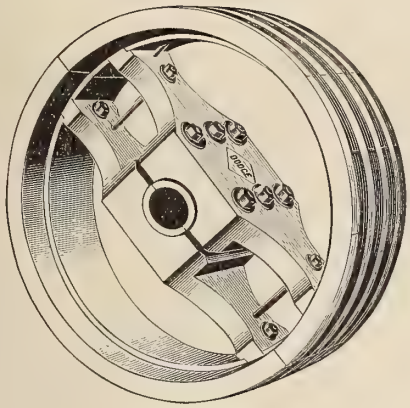
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A MONTHLY REVIEW OF MANUFACTURE AND COMMERCE

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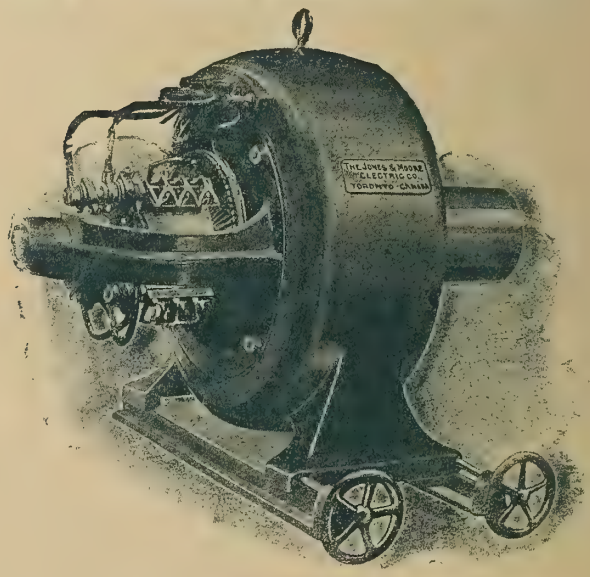
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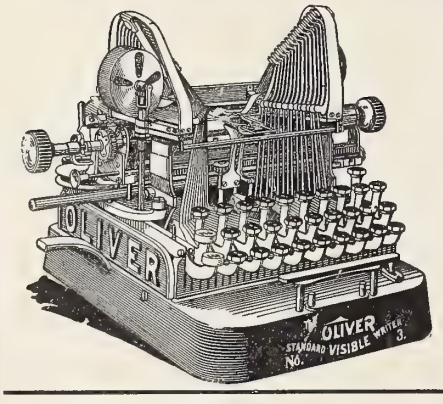
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Vol. V. TORONTO, FEBRUARY, 1905. No. 7

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THE UNITED STATES SILVER NUISANCE.

THE proposition which the Canadian Bankers' Association have made to the Dominion Government looking to the alleviation of the United States silver nuisance is one which will readily commend itself to the good judgment of the business men of Canada. It is, in brief, that the Government should arrange for the banks to take United States silver from the public, reimbursing the banks for the charges on shipping it out of the country, the banks to take at the same time from the Government an equivalent amount in Canadian silver. Under such an arrangement the silver circulation of our country would be quickly relieved of a large proportion of its foreign coin at comparatively trifling expense, and an immediate demand would be created for the product of our new Canadian mint, a product on every dollar of which, it must be remembered, our Government will make a profit of nearly fifty cents.

The circulation of United States bills in Canada does not at present occasion any annoyance. They are met with, it is true, in small quantities, but with nothing like the frequency that one meets with United States silver. The explanation of their comparative scarcity lies in the fact that they are regularly and systematically shipped out of the country by our banks. This for two reasons; first, the banks find that they can always be used to advantage in purchasing New York exchange at convenient points across the border; second, by removing them from circulation in Canada the banks are clearing the way for the freer circulation of their own notes, upon which they make a small profit. So long as they can buy United States paper currency from depositors at a small discount, it pays the banks to adopt this course. They are serving their own best interests by doing so, while incidentally they are also rendering their country a valuable service.

But in the case of United States silver the same conditions do not obtain. The banks have no silver token currency of their own with which this foreign coin comes into competition, so it is not, to the same extent as paper currency, an obstacle to their business. To use it for keeping up their New York balances would be impracticable on account of the heavy expenses involved in exporting it. The only possible way in which they could handle it without loss to themselves would be by charging a rate of discount which their customers would doubtless regard as prohibitory, and rather than do this they have adopted the policy of refusing to handle it at all. It is quite obvious therefore that under existing conditions we cannot look to the banks to relieve the situation.

To whom, then, are we to look? In the last analysis the responsibility for maintaining the purity of our national circulation attaches to one authority only, and that is the Federal Government. Were it the case that the removal of any pollution could only be brought about at a considerable financial sacrifice, we might understand the reluctance which the Government have displayed in taking the matter up. But when, on the contrary, such a removal would be accompanied by the enrichment of our national treasury to the extent of hundreds of thousands of dollars it seems difficult to conceive of the Dominion Cabinet failing to take advantage of the opportunity.

Every United States coin in circulation in this country is displacing a Canadian coin of equal face value. Its legal value in the United States, or its nominal value here, is much greater than its intrinsic value. It derives its nominal value by reason of the fact that it bears the Government's imprint or promise to pay. The difference between its intrinsic value and its nominal value, amounting roughly to fifty per cent., constitutes the profit which the Government makes on the circulation of that coin. Out of this profit it has of course to bear the cost of mintage, but a sufficient margin still remains to make the circulation very remunerative.

Why then, should not the Canadian Government enjoy the profit to be derived from any circulation under its control? Or why should the United States Government be allowed to continue adding to its wealth through the coinage of surplus silver which finds circulation in Canada? It cannot be answered that the circulation of United States silver in Canada is offset by the circulation of Canadian silver in the United States, for the disabilities placed upon our silver across the border are such as to discourage its importation. It would be foolish for Canada to retaliate by placing a discount on United States silver, for to do so would be to place obstacles in the way of the United States

buying our goods, whereas we want to sell the people of that country all we can, and get as much of their money as we can, in order to wipe out as much as possible of the balance of trade constantly standing at our debit.

The suggestion of the Bankers' Association seems to furnish the most satisfactory solution to this vexed problem, and by working in close conjunction with the banks it would appear that the Government might speedily accomplish the two-fold object of purging our circulation and enriching our treasury.

QUALITY OF NOVA SCOTIA COAL.

THE Toronto *Weekly Sun* says:

"Some twenty-five years ago Parliament strove to boycott American coal by a fifty-cent fine on every ton. As a scheme to boost mining properties down East it might have succeeded but for the fact that, like our coal oil, Nova Scotia coal is sulphurous. So we pay the fine, keep on using the American article, and let the Nova Scotia coal mines slide—to serve as a boodle fund for State Legislatures. This does not hurt the feelings of Mr. Fielding and the growing brood of our boycotting statesmen; they are too busy contriving how to stop us trading with neighbors."

This statement is not only absolutely false but a libel on a Canadian product. In the year 1903 the Province of Quebec consumed 1,572,386 tons of Nova Scotia coal and it gave great satisfaction there. The consumption last year was even greater but we have not exact figures at hand. It is used largely by Montreal manufacturers and by the Montreal Gas Company as well as in grates for domestic purposes. The reason why Nova Scotia coal has not been used in Ontario is not because of bad quality but because prior to the enlargement of the canals the cost of transportation was too great. The enlargement of the canals alters the situation and it is probable that Nova Scotia coal could now be economically laid down in this province, but it might be necessary to construct boats especially for this trade.

Some of the Nova Scotia coal seams are best suited for gas purposes and others for steam purposes. The gas coal is used not only by the gas companies of Montreal, St. John and Halifax but also by the New England Gas and Coke Company of Boston. The steam coal is used on the Intercolonial Railway, the eastern section of the Canadian Pacific Railway and by many steamship lines running between Montreal and England as well as by steamships running from ports of the Maritime Provinces. Peary used Cape Breton coal on his ships "Hope" and "Windward" on the Arctic voyage of 1898. He wrote from Cape York on July 25, 1898: "The character of the coal furnished my ships 'Hope' and 'Windward' was very satisfactory and enabled me to make in the 'Hope' a very quick run of ten days from Sydney to Melville Bay."

The agents of the Head Line Steamers at Belfast wrote to the Dominion Coal Company: "The chief engineer of steamship "Ramore Head" reports favorably of the bunker coal which you supplied that steamer last trip and as giving considerably better results than Scotch coal which had been supplied on previous occasions."

The chief engineer of the Royal Mail Steamship "Tongariro" in reply to an inquiry as to the quality of Cape Breton coal said: "I have not the slightest hesitation in speaking most highly of the quality of the coal supplied. We had not any trouble in keeping up steam, and the voyage to England showed as good results if not better than the best English coal. I might also say we did not find the coal at all hard on the bars."

The chief engineer of the S. S. "La Grande Duchess" wrote from New York as follows: "I have used Cape Breton coal on board S. S. "Olivette" of the Plant Line for several years with natural draught and was very well pleased with it. It makes steam with very little working and gave entire satisfaction."

The chief engineer of the Royal Mail Steamship "Gallia" wrote as follows of Cape Breton coal: "I have always found it to be of excellent steaming quality, remarkably free from clinker and dirt. We have not had any trouble whatever with burning of bars and have always made good speed when supplied with this coal."

The chief engineer of the S. S. "Halifax" wrote: "For the past five years and more the steamship 'Halifax' has been bunkered with the Dominion Coal Company's coal and it has given every satisfaction. It burns well with light draught, makes steam easily and produces a very small quantity of ashes and clinkers."

We have not at hand any testimonials regarding the quality of the coal produced in Pictou and Cumberland Counties, but it is well known that it is of good quality and has been used for many years with satisfaction in Montreal as well as the Maritime Provinces and on various steamships.

It is a curious fact that the freetraders of this country have never been able to see much good in anything Canadian.

FACTORIES FOR WINNIPEG.

THE city council of Winnipeg on January 23 discussed the question of encouraging manufacturing industries to locate in that city. The mayor declared that he had received inquiries from over one hundred different manufacturing concerns asking what inducements the city offered to manufacturers. He said there were millions of dollars worth of goods being imported which could easily be manufactured in the city giving employment to thousands of men. He thought Winnipeg ought to be in a few years one of the most important manufacturing centres of the Dominion. The old idea that the Northwest must always be merely a farming country importing all the manufactured goods required has been exploded. The cities and towns of Manitoba and the territories are looking forward now to a great industrial future. The growing confidence of the people of the Northwest in their country will give strength to protectionist sentiment, for it must be evident to everyone that it will be very difficult to build up prosperous industries in Winnipeg and other towns of the Canadian Northwest so long as the manufacturing cities across the border have their present unfair advantages. The Winnipeg manufacturer is completely shut out of the United States by the high tariff of that country. He cannot hope to supply the farmers of the Northwestern States with goods, but the low Canadian tariff permits the manufacturers of St. Paul and Minneapolis to compete with Winnipeg manufacturers everywhere in the Canadian Northwest. The metropolis of the Canadian Northwest will have the hearty good-will of the people of Eastern Canada in its efforts to build up manufacturing industries of all kinds.

SENATOR DAVID'S APPEAL TO THE NORTHWEST.

SENAROR DAVID, who is one of the most influential of the Quebec Liberals, made a strong protectionist speech in opening the debate on the address in the Senate. Referring to the Northwest he said:

"All the sections or Provinces of Confederation must be united by the cement of mutual help and protection; they must always be prepared to take such measures as may be necessary for their individual development. Therefore, if we give to the Northwest Territories the means of becoming the granary of the whole world, if we construct for them railways which will enable them to transport their products to all markets of the world they must in return be generous enough to place the older Provinces in a position to supply them with the manufactured products which they require."

That is a fair proposition. Without the credit of the Eastern Provinces the Northwest could not induce capitalists to

undertake great railway enterprises for the development of the country. At a time when the world at large had no belief in our Northwest, regarding it is an uninhabitable Arctic waste, the people of the Eastern Provinces pledged their credit for the building of a great railway through that country. They are now pledging their credit for another great transcontinental line. In many other ways the East has helped the West. The whole immigration policy of the Dominion has been directed toward settling Manitoba and the Territories.

It is only fair that the people of our Northwest should give the manufacturers of the Eastern Provinces a preference over the manufacturers of the United States.

It should be understood, however, that the manufacturers of Eastern Canada have no desire to prevent the development of manufacturing industries in the West. Undoubtedly great industries will grow up in our Western country just as they have grown up in the Western States.

We believe the great majority of the people in the Northwest are in favor of a policy of adequate protection. They not only wish to be fair to their fellow citizens in the East but they know that if they desire to have varied industries in the West growing up as the settlement of the country progresses they must have protection.

SUFFERING IN FREE TRADE ENGLAND.

THE *Toronto Globe* is collecting subscriptions for the families of idle workmen in the manufacturing districts of England. Harrowing descriptions of the sufferings of these poor people who cannot get work are published. If such distress existed in a country having a high protective tariff the *Globe* would publish many columns of editorials warning Canadians against a policy that produced such results.

Many Englishmen are beginning to wonder whether there would be so many British workmen out of employment if the money sent out of the country to pay for goods made in Germany and other foreign countries were expended on British goods. But the present distress in England will not help the Conservatives in the next general elections. Hard times always tell against the party in power. While the Balfour Government have been coquetting with the protection question they have not accepted the policy and are taking no measures to provide employment for the idle workmen. However, if the distress continues after a change in administration the British Conservatives in Opposition may have the courage to adopt a bold and straightforward protection policy. Mr. Chamberlain himself does not expect a Conservative victory in the next general election. Writing to a friend in Sydney, Australia, recently, he said that he never supposed it possible to obtain a settlement of the fiscal issue at the next general election, not because the movement was unpopular, but because there was hardly an instance in the recent political history of England of a Government being returned to power after so long a term of office as that enjoyed by the present ministry. "Our party," he adds, "will be none the worse for a short period of Opposition, which will serve to unite and invigorate them. Then on our return to power, look forward to a triumph!"

THE COMING TARIFF INVESTIGATION.

THE present session of Parliament is likely to be a very short one and it is expected that the Government will immediately afterward begin the tariff investigation. It is important that every manufacturer should in the meantime prepare any data that he may wish to place before the tariff commission. There is reason to believe that the Government are disposed to enter upon this investigation with open minds, but the manufacturers must be prepared to show why they require increased protection. There was never before a time in the history of Canada when public opinion was so strongly in favor of the adoption of a thoroughly Canadian tariff policy, and the probability is that after a careful inquiry the Laurier Government will give the country the most thoroughly protective tariff we have ever had. If this is not the result of the investigation there will be great disappointment throughout Canada.

AN OLD PROTECTION RECOMMENDATION.

IN 1854 a Committee of the Legislative Assembly of Canada was appointed to inquire into the commercial intercourse between Canada and Great Britain, the British North American Colonies, the West India possessions, the United States and other foreign countries. On the 26th of May, 1855, this committee of which William Hamilton Merritt was chairman, reported in favor of imposing "the same rate of duties on the manufactures of the United States as are imposed by that Government on the manufactures of Canada." At that time there was in force a treaty of reciprocity in natural products between Canada and the United States, but manufactured goods were not included. The Canadian Customs tax on manufactures was 12½ per cent. and the United States tariff averaged more than twice as high. The advice of the Commission was not taken but in 1858 the Canadian Government did adopt a protective tariff on manufactures which, while not so high as that of the United States, was remarkably high as compared with the tariff that preceded it. The duties were increased from 12½ per cent. to 20 per cent. on a long list of manufactures, including manufactures of silk, wool, wood, iron, brass, copper, silver, glass, leathers of all kinds and India rubber, while boots, shoes, harness and ready-made clothing got protection to the extent of 25 per cent. This protective tariff caused the establishment of many industries in Canada, but unfortunately at the time of Confederation the tariff was lowered to please the Maritime Provinces, which had not yet adopted a protective policy. The fact that Ontario and Quebec were so much in advance of the Maritime Provinces in manufacturing enterprises at the time of Confederation was largely due to the fact that the Provinces of Upper and Lower Canada had enjoyed a considerable measure of protection for a number of years before Confederation while the Maritime Provinces were laboring under the disadvantage of free trade.

If the advice contained in the tariff report of 1855 had been immediately adopted in full there would have been still greater progress in manufacturing in the two old provinces of Canada. We often hear the phrase "reciprocity of tariffs" used to-day by those who believe that if the United States tariff on Canadian products is not lowered the Canadian tariff should be raised to the United States level. The tariff report of 1855 used this very phrase, "reciprocity of tariffs," in advocating the raising of the Canadian tariff as high as the United States tariff, and excused it by declaring that "it is no departure from the general principle of free trade to counteract the legislation of other countries."

If Canada should adopt a tariff approximating to that of the United States probably many of those who now favor such a policy merely as a measure of retaliation would in a few years be so impressed with the good effects of adequate protection that they would not wish to reduce the tariff even if the United States should offer to reciprocate. The true protectionist does not believe in the principle of "reciprocity of tariffs," but holds that the tariff should be made to suit the needs of his own country no matter what the legislation of other countries may be. It would be good policy for Canada to adopt a tariff approximating to that of the United States not as a measure of retaliation, but because the experience of the United States has demonstrated that such a policy is efficacious in building up home industries of all kinds, developing natural resources and creating a home market for farmers.

FACTORY COSTS.

THE importance and value of an adequate system of factory costs is every day becoming more and more apparent to the manufacturers of this country.

In pioneer times, when establishments were small, when competition was less keen, when the buying public were less discriminatory, the need of cost accounts was not felt to the same extent. Each proprietor was in close touch with all the work done on his premises. He knew approximately what and how much material was used. His fixed charges and general expenses were small, and he could, with little difficulty, arrive at a fair estimate of what it cost him to produce a given article.

But now all that has been changed. Establishments are larger and processes more involved. The proprietor has had to call to his aid foremen and superintendents. Where formerly an article was the work of one man alone, it is now, by the use of specialized machinery, the work of perhaps a score of men. The output of factories a thousand miles away is, by means of improved transportation facilities, brought into active competition with his own. The consumer, with a larger field to choose from, has become better educated and more critical. He is no longer content to accept whatever is thrust upon him. He demands an article of a certain style, finish and workmanship, and believes he should get it for a certain price.

All of these points have complicated the question for the manufacturer. They have made it necessary for him to look closely after every item of expense entering into the cost of his finished article. His success, his very existence in fact, depends upon his ability to produce at a cost as low as that of his competitor. When he finds that competitor selling for 95 cents an article which he himself is selling for $1.00, it is essential that he should know how such a thing is possible. Is the cut in price due to more efficient methods of production, or is the competitor actually selling at a loss in order to get the business? The only answer to this question is to be had from an examination of the cost accounts. The price of labor and material are known and can be compared. If there is a leak in the charges for general expenses or unproductive labor the manufacturer should instantly be able to put his finger upon it. If, however, it is seen that all these expenses have been kept within reasonable limits, and that the rate of profit is a legitimate one, it may be safely assumed that the reduction in price in unjustified, that it means a loss. This is the important point, for upon it will depend the policy to be followed.

Again, a manufacturer may at any moment be brought face to face with a demand for increased wages. Or perhaps he is called upon to consider some slight improvement in the quality of the material he uses. Or he may desire to know at what price he can afford to sell a certain article if he doubled his output of that article without increasing the cost of his unproductive labor. To deal satisfactorily with any or all of these problems he must have before him an analysis of his factory costs. He there sees what percentage of the cost of the finished article the cost of productive labor is. He is able to tell exactly what that percentage would be if twenty-five cents a day were added to the wages of the productive workman. To maintain his profit at the same rate he knows exactly what the article must be sold for, or if he is to continue selling at the same price he knows to what extent he must increase his output.

In a great variety of ways, of which these are simply suggestions, an efficient system of cost accounting can be of untold value to the manufacturer. For the purpose of illustrating some of the systems in vogue, INDUSTRIAL CANADA is arranging to publish from time to time short articles on cost accounting as applied to different industries. The first of these appears on another page of this issue, and is commended to all interested as being descriptive of the system adopted by one of the most up-to-date publishing houses in Canada. The series will be continued only so long as seems justified by the interest with which these articles are received.

INSURANCE DEPARTMENT ORGANIZED.

The Fire Insurance Committee of the Canadian Manufacturers' Association at a meeting held on January 27th, made substantial progress in the organization of their Insurance Bureau by the appointment of Mr. E. P. Heaton, of Montreal, to the position of Manager of that department of the Association's work.

Mr. Heaton's experience in the fire insurance business extends over a period of twenty-seven years; indeed, it is the only business in which he has been engaged since he entered into business life at a comparatively early age. He was trained as a junior in the office of the London and Lancashire Fire Insurance Company in Liverpool, subsequently removing to London, where for three years he held an important position in the office of a company since retired from business. His work in these two companies commended itself to the management to such an extent that in 1883 he was sent to this country to take the position of fire superintendent of the company with which he had been engaged in London. Four years subsequent to this, Mr. Heaton was called to New York to assume a similar position in the company with which he received his early training in Liverpool. Later, he accepted the appointment of manager of the Citizens' Insurance



E. P. HEATON,
Manager, Fire Insurance Department.

Company of Canada. In 1892 he was appointed manager for Canada of the Guardian Assurance Company, which position he occupied until the close of the year 1903.

During the years since his return to Canada, that is, since 1890, Mr. Heaton's name has become associated with the progressive element in the fire insurance business, and his record as a successful insurance manager is acknowledged and appreciated by the community at large.

Mr. Heaton in the course of his twenty-seven years' service has had experience in field work both as inspector and as fire loss adjuster, whilst for the last thirteen years his occupation of the chief executive position of two companies has abundantly demonstrated his marked ability and utilization of the benefits so wide an experience has given to him. It must stand to reason that one so well equipped in all branches of the fire insurance business will occupy the position to which he has now been called to the great advantage of the members of the Association, whilst the committee, which for some time past has been giving so much consideration to the problems involved in connection with this new departure in the Association's work, have every reason to feel pleased in securing a manager so well qualified to further their aims and objects.

Executive Council

JANUARY MEETING.

A Month of Steady Progress in all Departments — Further Improvements for Industrial Canada — Changes and Additions to the Staff — Objection taken to the Importation of Patented Articles—The Membership Boom Continues.

The January meeting of the Executive Council, Canadian Manufacturers' Association, was held in the Council Chamber, Board of Trade Building, Toronto, on Thursday, January 19, 1905, at 2 p.m.

The meeting was a large and enthusiastic one. Mr. W. K. George, the President, occupied the chair, and the following other members of the Council were present:—Messrs. Geo. Booth, Toronto; P. H. Burton, Toronto; H. Cockshutt, Brantford; Robt. Crean, Toronto; John Dick, Toronto; Richard A. Donald, Toronto; L. V. Dusseau, Toronto; H. W. Fleury, Aurora; Geo. D. Forbes, Hespeler; W. P. Gundy, Toronto; Ernest G. Henderson, Windsor; J. Hewton, Kingston; R. McLaughlin, Oshawa; P. McMichael, Toronto; J. A. Publow, Hamilton; A. S. Rogers, Toronto; T. H. Smallman, London; J. T. Sheridan, Toronto; T. A. Staunton, Toronto; Wm. Stone, Toronto; J. O. Thorn, Toronto; C. Turnbull, Galt; R. J. Whyte, Smith's Falls; C. R. H. Warnock, Galt; R. C. Wilkins, Montreal.

The minutes of the preceding meeting as published in the last issue of INDUSTRIAL CANADA were approved.

Communications.

Letters of regret were received from the following members of the Council who were unable to be present:—Messrs. Geo. E. Drummond, Geo. E. Amyot, S. W. Ewing, J. M. Taylor, C. H. Waterous, Arthur W. White, T. A. Russell.

The Secretary presented an interesting letter from Lord Strathcona, expressing his gratification at the approaching visit of a number of members of the Association to Great Britain. Referring to the announcement, Lord Strathcona wrote: "This intimation I have received with much gratification, as I feel that the visit to this country of the members of the Canadian Manufacturers' Association will be an important factor in bringing about closer commercial interests, mutually beneficial both to this country and Canada, and indeed, the colonies generally. It will at all time afford me much satisfaction to be of use to your Association in any way within my power."

Reports of the officers and committees were then presented as follows, and with the amendments indicated were duly adopted.

Secretary.

The Secretary reported a busy month in the work of the organization. With the inauguration of the new Insurance Department, the change of officials in the Transportation Department and in the Montreal Branch, the arrangements for the British excursion, and the opening of another session of Parliament, considerable extra work had been necessary. The progress made during the month was covered in the reports to be presented.

Treasurer.

The report of the Treasurer, showing the financial standing of the Association on January 1st, was presented by Mr. Geo. Booth.

Finance.

The report of the Finance Committee was read by Mr. J. O. Thorn. It presented for payment the regular monthly expenditure of the Association, and in addition recommended:—

1. The advance of a sum sufficient to cover the expenses in connection with the inauguration of the new Insurance Department, on the proviso that a certain amount of business should be guaranteed to the Department by the members of the Association.

2. That Mr. J. F. M. Stewart, the Assistant Secretary, should be delegated to represent the Association at Ottawa as far as might be required during the present session of Parliament.

3. That an early meeting of the Manitoba Branch of the Association should be called with a view to increasing the activity among the members of that Branch.

The report also provided for interim salaries for January for Messrs. W. H. D. Miller and E. H. Cooper, who are retiring from the staff.

Industrial Canada.

The report of this Committee was presented by the Chairman, Mr. A. W. Thomas. Two meetings had been held during the month.

The financial standing of the paper had received the special attention of the Committee. A reduction in the fixed charges against the paper was recommended so that the publication might have every opportunity to show itself to be self-sustaining. At the present time the revenue was scarcely sufficient to cover the cost, but the Committee expressed the belief that the annual statement for the current year would not show a deficit.

A recommendation that advertisements for the columns of the paper should be accepted from firms in any part of the British Empire as well as from Canadian advertisers was approved upon the understanding that a further discussion of the matter should take place with the Executive of the Montreal Branch.

Provision was made for opening a column under the direction of Mr. S. M. Wickett for the review of new books dealing specially with commercial and manufacturing subjects.

The appointment of Mr. B. L. Anderson as Dominion advertising solicitor for the paper was approved.

The report also stated that a change was being made in the insertion of the card advertisements in order that they might be made more attractive.

Insurance.

Mr. P. H. Burton, the Chairman of the Insurance Committee, presented a report showing the progress made in the investigations respecting insurance during the past month. The report was carefully discussed by Messrs. E. G. Henderson, P. W. Ellis and the President, and the approval of the Executive Council given to work and plans of the Committee as announced up to the present time.

Parliamentary Committee.

In the absence of the Chairman, Mr. F. B. Polson, the report of this Commmittee was presented by Mr. P. W. Ellis. This report, together with the resolutions attached, are published in another column.

The resolution with regard to the removal of United States silver from circulation in Canada was referred back to the Committee for further investigation, and with this amendment the report was adopted.

Railway and Transportation Committee.

The report of this Committee was presented by the Chairman, Mr. H. Cockshutt. It is published on the next page.

Reception and Membership Committee.

The report of this Committee was presented by the Chairman, Mr. Robt. Crean.

The report was notable in that it recommended for acceptance seventy-nine applications for membership, which is the largest number presented in any one month during the history of the Association.

The Committee also reported briefly the success attending the dinner held in London on the 6th inst., and referred with pleasure to the successful series of luncheons which were now being held on the second and fourth Thursday of each month at the Royal Hotel, Hamilton, under the auspices of the Hamilton members.

The report showed the progress being made in connection with the proposed excursion to Great Britain. Up to that time about fifty passengers had been booked and a great many others had the matter under consideration.

One of the applications for membership was referred back to the Committee for investigation.

Following the presentation of this report the Chairman of the Committee moved that the Executive Council express its hearty thanks to the local Committee and the other members of the Branch in London for the enthusiastic manner in which the arrangements for the London dinner had been carried forward. This was seconded by Mr. P. W. Ellis and unanimously carried.

Branches.

The reports of the Montreal and Toronto Branches were presented by Messrs. R. C. Wilkins and Richard A. Donald respectively.

The Secretary reported interesting meetings of the Executives of the Quebec Branch held on the 29th ult., and of the Nova Scotia Branch held on January 5th.

Montreal Secretary.

The President and the Secretary referred with deep regret to the change necessitated in the Montreal office through the resignation of Mr. E. H. Cooper, who for the past three years had carried on the Executive work of the Association in that important branch. They testified to the splendid services rendered by Mr. Cooper during his tenure of office, the excellence of which had been reflected in the progress made by the branch during that time. It was unanimously agreed that a resolution expressing the Executive Council's appreciation of Mr. Cooper's services should be forwarded to him, with an expression of regret that his departure from the Association was rendered necessary. The best wishes for his future were expressed on all sides.

Postal Rates to Mexico.

Under the head of new business, Mr. J. O. Thorn presented the following resolution with reference to the new postal regulations now in force between Canada and Mexico. This resolution upon being seconded by Mr. Wm. Stone was unanimously carried.

WHEREAS, largely through the efforts of the Postmaster General, Sir William Mulock, the Postal Administrations of Canada and Mexico have adopted a Convention under which on and from the 1st of January, 1905, mail matter of the First, Second and Third Classes of the Canadian Domestic Regulations, that is, Letters, Newspapers, Samples of Merchandise, and the printed and miscellaneous matter comprised within the Third Class, may go to Mexico at the same rates and under the same regulations as matter passing between two Canadian Post Offices;

AND WHEREAS, this very material reduction in the postal rates will undoubtedly be of considerable value in many ways to Canadian manufacturers, producers and exporters;

BE IT THEREFORE RESOLVED, that the hearty and sincere thanks of this Association be tendered to Sir William Mulock for his successful efforts in connection with this matter.

The Council then adjourned.

PARLIAMENTARY COMMITTEE.

Your Parliamentary Committee beg to report having held one meeting on the 17th inst., at which the following matters were taken up:

Reports were received from the Branches in Montreal, Quebec, and Halifax stating the views of the local Executive Committees on the taxes levied against Extra-Provincial Corporations. One of the members of the Committee referred particularly to the tax levied against his company in the province of Quebec, where a local agent was employed. After careful discussion it was agreed to await complete information from the various branches, and to proceed in the Province of Ontario to have the Government exempt from taxes companies incorporated under Dominion charter or in provinces granting similar exemption to Ontario companies.

It was also agreed to await the information from the other branches of the Association respecting the franchise of incorporated companies in the various provinces.

Representation at Ottawa.

The Dominion Parliament having convened, and various interests having already sent down their representatives to watch legislation in their interests, the Committee considered it of the utmost importance that this Association should be represented, and if possible, by one of its own officers. It was accordingly unanimously recommended, that if possible the Assistant Secretary should be delegated to attend at Ottawa at as early a date as possible, and to remain there for as much time throughout the session as the interests of the Association might require.

Dominion Patent Act.

The attention of your Committee was called to the fact that certain companies intended to apply to the Parliament of Canada at its present session for an act to authorize the importation into Canada for a period to the end of 1907 of a number of patented parts used in the manufacture of railway cars.

The report of the Montreal Branch for the month, expressing the view of the Montreal Executive as opposed to the granting of any privileges, met with the approval of your Committee, and they beg to recommend that the request be disallowed. The resolution embodying the views of the Committee is as follows:

WHEREAS, notice is given on behalf of certain companies intending to manufacture railways cars in Canada, that application will be made at the present session of the Dominion Parliament for an act to authorize the importation into Canada for a period to the end of 1907, of certain parts to be used in the manufacture of cars,

AND WHEREAS, the granting of such request would not only involve the extension of special privileges contrary to the regular provisions of the Dominion Patent Law, but would discriminate against Canadian workingmen and manufacturers in favor of foreign firms,

THEREFORE BE IT RESOLVED, that the Executive Council of the Canadian Manufacturers' Association should respectfully convey to the Government its opinion that in the interests of Canadian industries the application referred to should be refused.

United States Silver.

The circulation of United States silver in Canada was referred to in a letter addressed to the President of the Association by Mr. Wm. Smaill of the Canada Horse Nail Company, Montreal, which came before your Committee for consideration.

After discussion it was decided on motion of Mr. Thorn, seconded by Mr. Turnbull, that, carrying out the views of the Association as expressed in the resolution adopted at the 1903

Annual Meeting, a resolution should be placed before the Executive Council to be forwarded after endorsation to the Bankers' Association and to the Minister of Finance.

All of which is submitted.

F. B. POLSON,
Chairman.

RAILWAY AND TRANSPORTATION COMMITTEE.

The Committee at its meeting of January 18th discussed the following questions:

Toronto Expropriation.

As requested by the Eckardt Casket Company, the Manager of Transportation Department appeared before the Railway Commission in Toronto, urging, along with other bodies, that the compensation to manufacturers affected should be adequate and the basis should be fixed by the Railway Commission. These representations, it will be observed, have not been sustained by Deputy Chief Commissioner, the Honorable M. E. Bernier, though they were supported by Commissioner Doctor Mills.

Rates to and from Maritime Provinces.

Following the recent agitation approved by Committee for an equalization of east and west bound general merchandise rates, complaints have been forwarded to the Association from St. John of the attitude of the Association. Replies have been addressed to these members explaining, apparently satisfactorily, the Maritime Province rate situation.

Barley for Brewing.

The cancellation of recent special rates which seems to affect materially the brewers in Montreal is being considered from the broad aspect of the question as affecting all brewers and maltsters.

Grain Rates.

The Railway Act requiring a notice of ten days of a proposal to advance rates was apparently overlooked by the railways in making the recent advances in flour and grain rates to the Maritime Provinces. A protest was filed with the Railway Commission and the situation resulting from an advance in the rates on a notice of four or five days has been corrected by the Railway Commission requiring railways to call for claims, adjusting overcharges arising from the improper notice.

Demurrage.

The Manager of Transportation informed the Committee regarding the progress of his investigations upon the subject of demurrage. A large amount of valuable information is being received from the members and a careful study of the conditions existing in the United States and Canada is being made.

Various other matters have been dealt with affecting the interests of individual members of the Association.

Mr. John R. Marlow, the Manager of Transportation, who assumed his duties at the beginning of the month, has been introduced to the work and has carefully reviewed the various matters now pending in the Department.

TORONTO AND MONTREAL BRANCHES.

The January meetings of the Executives of the Montreal and Toronto Branches were well attended.

Toronto Branch.

The Toronto Branch appointed a special committee to interview the Board of Control to suggest that the duties now carried on by the Assessment Department of the city be divided, with competent men appointed for the different branches of the work. The same committee was requested to ask the Board of Control to procure legislative authority to grant exemption from taxes on machinery in the city for this year. This exemption has been in force for the last twelve years and is provided for in the Assessment Act coming into force the first of next year.

Both of these matters were presented to the Board of Control and the committee hope to report satisfactorily in the near future.

On the evening of the Provincial Elections, January 25th, an informal dinner and smoker was held at McConkey's, at which 175 members of the Branch were present. The election returns were received by private wire and promptly announced. Capt. A. T. Hunter gave an address on "The Game and Play of Elections," and a programme of songs and readings was provided. The function was one of the most enjoyable that has yet been held under the auspices of the Branch.

Montreal Branch.

The question of opposing the custom of issuing trading stamps was brought before the Executive in a letter from the Quebec Branch. They decided that this was a matter that should be dealt with by the Board of Trade, but it was referred for action to the Manufacturing Grocers' Section of the Association.

At the request of the Fire Insurance Committee of the Asso-tion, Mr. J. J. McGill was appointed an additional representative on the Committee from Montreal.

The Branch expressed the opinion that it was not advisable at present to open the columns of INDUSTRIAL CANADA to British advertisers.

A number of applications for the position of Secretary of the Montreal Branch was received, and after careful consideration the appointment was given to Mr. Dakers Cameron, B.A.

The Toronto Branch recommended for acceptance 13 applications for membership and the Montreal Branch 3.

REMARKABLE GROWTH IN MEMBERSHIP.

Seventy-nine New Names Added to the Roll in January — The Largest Monthly Increase on Record.

Brantford, Ont.

UNDERFEED STOKER CO., LIMITED.—(Lloyd Harris, 2nd Member).

Chatham, Ont.

WM. M. DRADER.—Lumber, Staves and Heading.

Cutler, Ont.

LOVELAND & STONE.—Lumber and Lath.

Dundas, Ont.

GRAFTON & CO., LIMITED.—Clothing.

Goderich, Ont.

THE GODERICH KNITTING CO'Y, LIMITED.—Hosiery and Fine Mitts.
GODERICH LUMBER CO.—Hemlock and Pine Lumber.
THE KENSINGTON FURNITURE CO., LIMITED.—Furniture.

Hamilton, Ont.

THE BATES PEACOCK CO.—Mince Meat, Cream Cheese, and Worcestershire Sauce.
G. C. BRIGGS & SONS.—Patent Medicines.
BROUGHTON STAMP AND STENCIL CO.—Stamps, Stencils, Name Plates, Die Sinking, etc.
JOHN E. BROWN.—Whips and Lashes.
CANADA GROCERS, LIMITED.—Coffee and Spice.
THE CANADA SCREW CO.—(H. C. Birge, 2nd Member).
THE COMMERCIAL OIL CO., LTD.—Oils, Greases and Lubricants.
COPPLEY, NOYES & RANDALL, LIMITED.—Wholesale Clothing.

JOHN CRANSTON & SON.—Flower Pots.
ROBERT DUNCAN & Co.—Office Supplies and Stationery.
W. G. DUNN & Co'Y, LIMITED.—Mustards and Spice Foods.
HAMILTON GRANITE WORKS.—Granite.
IMPERIAL VINEGAR AND PICKLING Co'Y, LIMITED.—Vinegar.
JAMES JOLLEY & SONS, LIMITED.—Saddlery, Harness, etc.
LAKING, PATTERSON & Co.—Lumber and Planing Mill Products.
JOHN LENNOX & Co.—Shoes.
MALCOLM & SOUTER FURNITURE Co., LIMITED.—Chamber Furniture, Parlor Tables, Music Cabinets, etc.
ONTARIO ENGRAVING Co.—Engravings (Half Tone, Zinc and Wood).
ONTARIO TACK Co., LIMITED.—(J. Orr Callaghan, 2nd Member).
JOHN E. RIDDELL.—Galvanized Iron Work.
THE SHULTZ MANUFACTURING Co.—Lanterns, Burners, etc.
THE SPECTATOR PRINTING Co., LIMITED.—Publishing in all its branches.

Hastings, Ont.

THE WELSH TANNING Co., LIMITED.—Leather.

London, Ont.

BART COTTAM Co.—Bird Foods and Supplies; Washing Compounds and Grocers' Sundries.
FRASER CAP Co.—Caps.
GREEN, SWIFT & Co.—Men's and Boys' Clothing.
G. E. HOTSON.—Picture Mouldings and Picture Frames.
LINE, MCDONALD & Co.—Cigars.
THE LONDON ENGINE SUPPLIES Co., LIMITED.—Boilers, Power Transmission Supplies, Heaters, Purifiers and Power Pumps.
LONDON PANT AND OVERALL Co.
W. E. SAUNDERS & Co.—Pharmaceutical Preparations.
UNITED FACTORIES, LIMITED.—(Thos Bryan, 3rd Member).
THE WAGGONER LADDER Co., LIMITED.—Ladders, Step Ladders, Trestles, Clothes Reels.
WESTERN WIRE NAIL Co., LIMITED.—Wire Nails.
THE WRIGHT HAT Co., LIMITED.—Straw and Felt Hats.
WRIGHT, SONS & Co.—Robes and Furs.

Midland, Ont.

PLAYFAIR & WHITE.—Lumber.

Montreal, Que.

CARTER WHITE LEAD COMPANY OF CANADA.—White Lead, Red Lead.
MASON, GORDON & Co.—Logs and Square Timber.
UNITED TYPEWRITER Co., LIMITED.—(V. Cormack, 2nd Member).

New Hamburg, Ont.

NEW HAMBURG MANUFACTURING Co., LIMITED.—Engines and Threshers.

Newmarket, Ont.

DAVIS LEATHER Co., LIMITED.—Leather.

Oshawa, Ont.

R. WOON & Co.—Clover Threshing Machines.

Ottawa, Ont.

THE OTTAWA MACHINERY Co., LIMITED.—Saw and Shingle Machinery.

Quebec, Que.

MECHANICS SUPPLY Co.—Plumbers' Goods.

Regina, N.W.T.

THE WESTERN MANUFACTURING Co., LIMITED.—Grain Separators, Interior Finish, Silent Salesmen, Stairs, Sash, Doors, etc.

St. Catharines, Ont.

J. M. ROSS SONS & Co.—Engines, Threshing Machines, Saw Mills.

St. Marys, Ont.

C. RICHARDSON & Co.—Cheese Factory, Creamery and Dairy Apparatus, etc.

Sarnia, Ont.

J. S. LOUGHEAD & SON.—Hubs, Spokes and Carriage Bent Goods.

Stratford, Ont.

THE STRATFORD CLOTHING Co., LIMITED.—Men's Clothing.
THE STRATFORD KNITTING Co., LIMITED.—Woollen Mitts and Gloves.

Toronto, Ont.

ATLANTIC SOAP AND OIL Co., LIMITED.—Soap.
FRANK BRODERICK & Co.—Clothing.
CANADA CLOAK Co'Y.—Coats.
THE CANADA PROCESS Co., LIMITED.—Chemicals and Drugs.
CANADIAN OIL Co., LIMITED.—(W. W. Cumming, 2nd Member).
CARRIAGE MOUNTINGS Co.—Carriage Mountings.
CONSOLIDATED ELECTRIC Co., LIMITED.—Electrical Apparatus, Motors and Dynamos.
R. LAIDLAW LUMBER Co.—Lumber.
NORTHERN IRON AND STEEL Co., LIMITED.—Steel and Bar Iron.
NOVELTY MANUFACTURING Co.—Novelties.
ONTARIO SUGAR Co., LIMITED.—Sugar.
W. G. PATRICK & Co.—Confectionery.
J. THOMPSON & SON.—Dies, Novelties and Special Machinery.
THE VICTORIA HARBOR LUMBER Co'Y.—White Pine Lumber, Lath and Shingles.

Walkerville, Ont.

THE FORD MOTOR COMPANY OF CANADA, LIMITED.—Automobiles.
W. E. SEAGRAVE.—Fire Apparatus.
THE WALKERVILLE MATCH Co., LIMITED.—Matches.

Waubaushene, Ont.

THE GEORGIAN BAY LUMBER Co.—White Pine Lumber, Lath and Shingles.

Windsor, Ont.

THE ERIE TOBACCO Co., LIMITED.—Tobacco.
SEELY MANUFACTURING Co.—Perfumes, etc.
WALKER STEEL RANGE Co.—Ranges.

British Trade in Cuba.

Lionel Carden, British Minister in Havana, in his report to the Foreign Office, states that there is no reason to apprehend that the preferential treatment accorded by the reciprocity treaty to United States merchandise will prove sufficient to divert much if any trade in certain branches from English merchants.

He refers especially to rice, which he says will continue to be sold in Cuba owing to the cheapness of its production in British India, and to English ale, which will continue to be used owing to local tastes. He also refers to the importation of British textile goods, which will continue to find a ready market in Cuba because of the superiority of their manufacture, coupled with the special attention paid by British shippers to the wishes of the consumer in regard to quality and design.

Mr. Carden declares that these conditions will prevail so long as the present rates are maintained. In other branches of industry, especially in the metal trade, the preference to the United States is sure to be felt. British manufacturers will have to bestir themselves if they wish to retain their share of the trade. Mr. Carden thinks that with the growing wealth of the country the native imports will change. Eventually it will not be necessary to bring in cattle from abroad and the importation of articles of luxury will increase.

RECIPROCITY A DREAM OF THE PAST

*An Answer to the Present Agitation in the United States in Favor of Reciprocal Trade Relations.**

By HON. W. H. MONTAGUE, M.D.

The history of reciprocity between the United States and Canada is to us as old as the history of the Dominion. It is a history full of records of disappointments and failures in one direction; equally full of successes and triumphs in another direction. Disappointments and failures by reason of the futility of our efforts to secure it, success and triumphs because of the victories which we have won in other directions and in other avenues to which our attention and our energies have been turned.

May I recall to you to-day some of the pages of that history, because it appears to me it is essential to a thorough understanding of our attitude upon the matter at the present date.

After six years of efforts a reciprocity treaty was concluded in 1854 between the United States and the then British Provinces of North America. That treaty was abrogated by you in 1866. It is interesting and instructive to recall some of the effects which were produced by it and some of the results which flowed from it. The interchange of traffic between the two countries increased from $33,000,000 in 1853 to $84,000,000 in 1866.



HON. DR. MONTAGUE.

Clearly, however, the results of the treaty so far as they were understood by you were not satisfactory to you, but I am inclined to think, and indeed I think I am justified by the record in thinking so, that your dissatisfaction arose largely from want of correct information with regard to its effects. Perhaps, however, your dissatisfaction with it was also to a large extent due to the rising tide of protection that was then taking hold of the people.

An official memorandum was prepared in 1874 by one of the British Plenipotentiaries, and that memorandum I fancy is now on file in your State Department at Washington. The statistics therein contained with regard to the results of the Elgin Treaty were collated from your own public records, were submitted to your representatives and thoroughly examined by the officers of your Departments, and when this had all been done their correctness was cordially and freely admitted. From the figures of that memorandum I gleaned that the traffic between Canada and the United States increased year by year in volume. In 1853 it was $20,000,000, in 1854 it was $33,000,000, in 1863 it was $85,000,000, in 1866 it was $84,000,000, but it is important to enquire wherein the increase was made in exports from your country or in imports to. Let me answer that question once more with the statistics in the memorandum. There is one slight difference between the figures from our trade returns and yours. but taking either side of the statistics the balance of trade during the time when the Treaty was in operation was at least $20,000,000 against Canada and probably nearer $100,000,000. The gross trade between the two countries for the thirteen years was according to your returns $671,000,000, according to our returns $630,000,000; large figures you will admit when it is remembered that the British Provinces at that time contained a population of only 3,000,000 people.

It is important also to know what the nature of the trade was. So far as our purchases from you were concerned I find that no less than $150,000,000 of them were of farm products, $8,500,000 worth of timber, $24,000,000 worth of miscellaneous articles, and no less than $151,000,000 worth of general merchandise, a sum to which no other country approached in those years. Indeed, Sir, if you will consult your trade and navigation returns for that period you will find that during the thirteen years of the Treaty operation our purchases from you were greater than the purchases made by China, Brazil, Italy, Hayti, Russia and her possessions, Venezuela, Austria, the Argentine Republic, Denmark, and her possessions, Turkey, Portugal and her possessions, the Sandwich Islands, the Central American States and Japan all put together.

In another way, Sir, the Treaty was an important factor. You had in 1862 over 203,000 tons of shipping engaged in the St. Lawrence fisheries and 28,000 seamen, and the cash returns for that year considerably exceeded $14,000,000. Take now the figures three years after the repeal of the Reciprocity Treaty which deprived the United States fishermen of the shore privileges enjoyed under that Treaty. The United States tonnage in that trade had fallen from 203,000 tons in the year 1862, to 62,000 tons in 1869. Take the years afterwards when these privileges under the Washington Treaty were restored to you, and you will find that the tonnage rapidly increased again. Notwithstanding, Sir, that we believe, as our discussions in our Canadian Parliament show, that the Treaty was of more advantage to you than to us, still we were anxious for its renewal because we were just then entering into Confederation and had many difficult problems to face, and besides we had not then sought out other markets. Consequently the Coalition Ministry which had been formed for the purpose of carrying Confederation made strong efforts for the renewal of the Elgin Treaty.

George Brown's Resignation.

So strong were those efforts that the Hon. George Brown, who was a Liberal, and the leader of the Liberal Party of Canada, and had joined the Coalition Ministry in order to consolidate the Provinces, resigned because he felt that Canada was being demeaned by the course pursued by his collegues in that regard. Allow me to quote from a speech which he made in the Senate of Canada and which explains his position upon that question, and which at the same time shows how far Canada went.

Speaking in the Senate in 1875 Mr. Brown said: "I resigned from the Government because I felt very strongly that although we in Canada derived great advantage from the Treaty of 1854, the American people derived still greater advantage from it. I had no objection to the Treaty, and I am quite ready to renew it or even to extend it largely in future in terms of reciprocity but I was not willing to ask for a renewal of it as a favor to

*An Address delivered before the Fitchburg (Mass.) Chamber of Commerce.

Canada; I was not willing to offer special inducements without future concessions in return; I was not willing that the canals and inland waters of Canada should be made the joint property of Canada and the United States and be maintained at their joint expense; I was not willing that the custom and excise duties of Canada should be assimilated to the prohibitory rates of the United States; and very especially was I unwilling that any such arrangement should be entered into with the United States dependent on the frail tenure of reciprocal legislation, repealable at any moment by the caprice of either party."

These expressions from the leader of the Liberal Party show how far the Government of that day were prepared to go, and how generous they were in their offer to you. But generous as were their terms, their offers were refused. Several efforts were made between '66 and '69. In 1869 negotiations were opened in July and they extended to March, 1870. A project was actually submitted, and that project included the cession for a term of years of our fisheries to the United States and the enlargement by us and the enjoyment by you of our canals; the free enjoyment of the navigation of the River St. Lawrence and the assimilation of our customs and excise duties; the concession of an import duty equal to the internal revenue of the United States; and the free admission into either country of certain manufactures of the other in addition to agricultural products. Once more, Sir, these propositions, generous in their nature, wide and inclusive in their scope, offering many things of advantage and of great advantage to the United States, were rejected.

Washington Treaty of 1871.

Then, Sir, I come to the time of the negotiation of the Washington Treaty of 1871. Upon the commission, which concluded this Treaty, the Rt. Hon. Sir John Macdonald, for a great many years leader of the Conservative Party in Canada and the founder of our National Policy, was one of the British Plenipotentiaries. In connection with these negotiations the British Commissioners asked for the settlement of the inshore fishery matter upon the basis of the renewal of the Treaty of 1854. Other concessions were also offered but the propositions were declined. But arising out of that Treaty you will remember that a Board of Arbitration was appointed to report upon the value of our fisheries which, under the Washington Treaty, had for the time being been turned over for your use. When that Board of Arbitration was about to meet the Government of Canada conceived it to be the proper time once more to approach your Government for the purpose of, if possible, increasing the trade between the two countries, and the Hon. Geo. Brown was appointed by Canada to open up negotiations upon that subject. The project of a Treaty was prepared which formed the basis of discussion, and you will be struck I am sure with the generosity of the offer made by Canada at that time when I read you the propositions we offered you for the renewal of the Treaty of 1854 on a twenty-one year basis:—

First—That the fishery arbitration provisions of the Washington Treaty should be abandoned, and that meant the offer of $5,000,000 in cash, because you afterwards paid us $5,000,000 upon the Halifax award in that connection.

Second—We offered that the Welland and St. Lawrence Canals should at our expense be enlarged forthwith and that you should have the use of them.

Third—We offered that we would even construct a new Canal, Caughnawage, from Lake Champlain to the River St. Lawrence which, when you had constructed the Whitehall Canal and improved the River Hudson, would have given you a waterway from New York to the base of the great grain bearing prairies of the West.

Fourth—We offered also that there should be included in the Treaty the following articles,—agricultural implements, extracts for tanning purposes, bath brick, brick for building purposes, hay, lime, malt, manufactures of iron and steel, manufactures of iron, steel, and wood, manufactures of wood, straw, stone, marble, etc,—a considerable list, the value of which many of you will I am sure appreciate.

Fifth—We asked also that there should be reciprocal registration of ships and reciprocity in the issuing of patents.

Now, I want to ask you, Sir, and to ask this great audience of mercantile men whether you do not think that Canada was generous and more than generous in her proposals, and yet she met with the same result, with the same answer, with the same refusal.

The Blow Proved a Boon.

After the attempts of the Government in 1875, practically the agitations for reciprocity ceased to be a leading factor in our politics. The effect of the refusals was that Canadians became stronger in their national and industrial life and it became apparent to us that what had seemed to us at the time to have been a serious blow to our prospects was really a boon, for we reached out for other markets and secured them. But the step which we took in 1879 had a still more important effect in lessening the sentiment in favor of a treaty, a policy in defense of our industries, and those industries began immediately to flourish and extend to such an extent that the value of our Home Market became more and more apparent to the people. Nevertheless, when the fishery treaty of 1881 was being negotiated, once more the subject of reciprocity was broached by our representatives, and a proposal made that the fishery difficulty should be settled upon that basis. No details were given as to what Canada's offer would probably be. The language employed by Sir Charles Tupper in describing his efforts in that direction led Parliament, however, to believe that a broad offer in general terms had been made.

The Negotiations of 1891.

I now pass on to 1891 when once more negotiations were opened up, three or four members of the Canadian Cabinet being present in Washington for that purpose. Mr. Blaine was then your Secretary of State, and the report of our commissioners was that the demand made by your government was such that had it been acceded to we should have been compelled to give you terms which we were estopped at your demand from extending to the mother land. This we had a perfect right to do if we wished to do it, but, Sir, no sentiment in Canada existed then or exists now which would justify any Government in acceding to any such request. I mention this fact particularly because I know there exists in some parts of the United States misapprehension upon that point. Canada is absolutely free to do as she likes in every way in connection with her tariff legislation.

Thus, Sir, have I gone over the many and various efforts made by the Dominion for a better basis of trade between the two countries. I should add that in 1879 when we put our national policy upon the Statute Books we placed therein a clause in the following words. "Any or all of the following articles,—that is to say: animals, of all kinds, green fruit, hay, straw, bran, seeds of all kinds, vegetables (including potatoes and other roots), plants, trees and shrubs, coal and coke, salt, hops, wheat, peas and beans, barley, rye, oats, Indian corn, buckwheat and all other grain, flour of wheat and flour of rye, Indian meal and oatmeal, and flour or meal of any other grain, butter, cheese, fish (salted or smoked) lard, tallow, meats (fresh, salted or smoked), and lumber, may be imported into Canada free of duty, or at a less rate of duty than is provided by this Act, upon proclamation of the Governor in Council, which may be issued whenever it appears to his satisfaction that similar articles from Canada may be imported into the United States free of duty or at a rate of duty not exceeding that payable on the same under such Proclamation when imported into Canada."

A Standing Offer of Reciprocity.

Thus was placed upon our Statute books a standing offer for reciprocity in a considerable line of articles. You have from time to time placed articles included in this list upon your free list, and we have reciprocated by placing them in the free list in our tariff. We found however that (perhaps accident-

ally) you were inclined to select articles which would be advantageous to you and to leave out those in which reciprocal trade would be advantageous to us, and besides we found that occasionally there was the show of reciprocity but not the reality.

For instance, while you admitted our peaches free you put a duty on the basket, and while your Federal Government admitted our nursery stock free, we find that the separate States exercising their rights, imposed handicaps upon our nurserymen. In Dakota a large market bond ($5,000) had to be deposited with the State Government before any agent could sell there any Canadian fruit trees, and in the State of New York I think a large agency license was imposed, and these things practically made the action of your Federal Government inoperative to our advantage.

I believe, Sir, that the many refusals of the United States to negotiate were due largely to a want of appreciation, an appreciation to which I believe you are now awakening, of the value of our Canadian Markets. It is true, Sir, that there were some men and some newspapers upon your side of the line which indiscreetly said, "let us refuse to grant Canada reciprocity, and she will shortly be knocking for admission politically into our Union." Sir, no more unwise words could have been said. They were not said, and I am glad they were not said, by those in authority. The Canadian people are a hardy, plucky and determined people. They are the descendants in part of those grand old explorers, Hennepin, LaSalle, and Verandraye, who westward with indomitable perseverence and energy carried the torch of civilization, in part of the hardy immigrant pioneers who hewed out their homes in the wilderness, in part of the Canadian Empire Loyalists who left their happy homes and smiling fields upon this side of the line and began life anew amid a thousand difficulties, rather than desert the flag which their mothers loved and for which their fathers had died, and to the descendants of those men such words as I have quoted meant only that they redoubled their energies and intensified their determination to stand independent and alone and the result, Sir, was the very opposite of what those who uttered them may have expected.

Reached Out for New Markets.

We reached out for markets in other parts of the world. We reached out to the great consuming market of Great Britain. Let me quote you some figures which show you how we succeeded. Canada sold to the United States in 1866 $25,000,000 of agricultural products,—in 1902 she sold $7,000,000 of agricultural products to you. In 1867 she sold to Great Britain $3,000,000 of agricultural products; in 1903 she sold to Great Britain $79,000,000 of agricultural products, and each year in every variety of product Canada has established herself ever more and more successfully in the markets of Great Britain. I am sure, Sir, that I need not hestitate to say that your farmers upon this side of the line have found us a formidable rival in its markets.

Canada has also established as I have already told you, her markets at home. We have long since learned that our home market is our best market. We raise altogether $500,000,000 of agricultural products a year, of that $400,000,000 worth are consumed at home and only $100,000,000 worth exported, and we recognize, Sir, that if we are to become great as a people, that if we are ever to settle profitably the great plains of our West we must do this more and more. We cannot even depend upon the British market as the consumer of our products. In the next few years we shall be sending abroad 125,000,000 bu. of wheat or its equivalent. When our soil is all under cultivation we shall probably be shipping 800,000,000 bu. of wheat or its equivalent per year, and as Great Britain consumes at best per annum only 175,000,000 to 200,000,000 bu. we recognize that we must look elsewhere, and the judgment of our people is that we must look chiefly and mostly to the great consuming masses who are and will be in ever increasing numbers manufacturing for our farmers in the West.

And now, Sir, what is the result of all our negotiations. A study of the conditions that exist in Canada to-day, as well as upon your side of the line, shows that we recognize that no longer are you a great market for us. Your fields have been developed and you are supplying your own artisans, and with what you have to spare you are competing with us in the markets of the world. I see that Mr. Foss says that our wheat is needed by the mills of Minneapolis. But we know as well as Mr. Foss does why our wheat is needed by the mills of Minneapolis. Is it needed because you are not receiving sufficient wheat to supply your own wants? No, Sir, but it is needed because the wheat of the North-West of Canada makes the best flour in the world, and your mills, in order to make the standard of the flour which you export as high as possible, use a certain admixture of Canadian wheat, and this is why you are permitting Canadian wheat to come into this country to be ground in bond, the product of it being shipped abroad and not entering into competition with your home article. It is a high compliment to us, Sir, but it is evidence that there is a market in this country for the surplus products of the farms of Canada.

And besides, may I say that we are Canadians, even if to be a Canadian is a little selfish. The more Canadian wheat is used the higher standard your exported flour reaches, and candidly let me ask you a question,—would it not be better for us to ship our own manufactured flour? Would it not be better for us to employ our own mills and our own people? That, Sir, is undoubtedly our policy as a Dominion. As our rapidly growing milling concerns indicate, we have 2,500 milling industries, some of which will grind 3,000 barrels per day, very many 200 barrels per day. Their output increased from $39,000,000 value in 1871 to $80,000,000 in 1903.

Significant Figures.

Let me give you some more figures, which will indicate to you that Canada does not look with longing eyes as she once did to your market for her products. Of grain and breadstuffs sold in 1903 to the markets of the world, amounting to $41,000,000, you purchased of us $1,320,000 worth; of $10,000,000 worth of cattle you bought only $120,000 worth; of butter, eggs and cheese, out of $46,000,000 worth you purchased only $77,000 worth, and of $5,000,000 worth of fruit shipped out of her own domain you bought only $220,000 worth. Out of her large quantity of meats of the kind sold in the markets of the world during 1902 and 1903 she sold you only 992,000 pounds, while we purchased from you 29,000,000 pounds. I am sure that I need not say to you that these are startling figures to you, and even more startling are the other figures, that taking the total trade as between the two countries the facts are that each Canadian family buys between thirty and forty times as much of United States products of all kinds as each United States family buys of Canadian products.

That there is an agitation in favor of reciprocity in Massachusetts may be taken for granted, but why has that agitation sprung up. Let Mr. Foss explain. I quote from his speech made in Minneapolis,—"Our manufacturers have been too busy to give much effort or thought to the subject, but from now on for a period times will not be so flush, there will be less business and more time for thought, there will be fewer words and more effort to think. This will turn attention to reciprocity which promises to open foreign markets."

In other words, Sir, the anxiety is for markets for your manufactures. This is not disguised, nor would it be possible to disguise the fact that that is why reciprocity is being agitated here. I listened with a very great deal of pleasure to your Vice-President Elect, the Hon. Mr. Fairbanks, who delivered a splendid speech at the Home Market Club, and what did Mr. Fairbanks say upon the subject of reciprocity? He said in effect that it was the desire of the government of the United States to extend trade wherever the extensions could be made without injury to American industries.

Canadian Industries Must Not Be Injured.

Sir, we are anxious to extend trade in Canada, but we are anxious to extend it only by means which will not injure our Canadian industries, and we will not injure or destroy our Canadian industries which have become such an important part of our national make-up for the advantages of trade in any part of the world. Let me say to you, and say unhesitatingly, that Canada does not dream of opening up her industries to the keen and destructive competition of the United States or of any other country. It is true a larger trade may be done with you. There are many things we need to buy from you upon which we may lower the duty, there are many things which you need to purchase from us and you can facilitate the purchase by lowering your duties. And beside, all hope is past, Sir, and I say it most emphatically, of any arrangement which would tie Canada's hands for the future and render her incapable of maintaining her own industries at home, or of entering into advantageous arrangements with other parts of the world. There was a time when you could have had the market of Canada upon terms which I have already quoted. You were then a giant slumbering in the mountains of your own prosperity and indifference. I tell you honestly that you slumbered too long. Canada is now so busy herself that she does not hear you knocking at her door for wider trade.

No Party Favors Reciprocity.

There is no political party to-day in Canada agitating for reciprocity. In the late Dominion elections, where four hundred and over Canadians contested constituencies and appealed for public favor, I did not hear of one whose platform was reciprocity. No leader spoke upon the subject in the campaign, and, indeed, it was not mentioned except when here and there some one expressed thankfulness that the proposals made in the past had not been accepted. The *Shareholder*, an independent financial journal in the great City of Montreal, which is not allied with either political party, in its last issue, in the words which I quote, expresses the real and genuine sentiments of the people of the Dominion. Here are the words:—

"We believe that so far as the people of the Dominion are concerned, any proposition relating to extended trade relations between the two countries should be rejected. The cost of any advantage we could possibly gain from reciprocity would be more than it is worth."

You gentlemen who read the *Toronto Globe* will see in it this morning practically a re-affirmation of what I have just quoted from the *Shareholder*.

Sir Wilfrid Laurier, the Prime Minister of Canada, some time ago declared that Canada no longer desired reciprocity. He also stated, "Well, we have tried to get reciprocity. We have approached the United States. We will approach them no more. They will now, if they want it, approach us." Well, Sir, we shall receive them politely.

Imperial Preferential Trade.

Need I tell you that reciprocity is incompatible with Canadian aspirations for a consolidated empire on trade lines, as it now exists on lines of sentiment. Canada is anxious, and anxious with hope, that the grand scheme of colonial and preferential trade so ably being battled for by Mr. Chamberlain will succeed. We hold these views without hostility to you, but we hold them strongly, and we look forward to the time when we, upon our own products in the market of Great Britain, will receive better terms than yours do. The desire for the consummation of that grand scheme of imperial breadth is, we admit, partly due to the material advantages which we may derive from it, but let me tell you also that as members of the empire we are anxious for it for broader and still better reasons. This plan of imperial and colonial union is, I have said, conceived in no hostility to you—no hostility to any nation under the sun. With the people of the Mother Land we are kith and kin; between us is the electric current of common empire, and common imperial aspirations. In the open field we have both met the severe stern competition of the trading nations of the globe. We are natural customers of each other, and in addition we are bound by ties of political union. Would you not expect us to consolidate in defence of trade as we would consolidate in defence of attack? Beside, all our efforts in Canada have been towards a united empire. We were the prime movers and among the heaviest contributors in the Pacific cable, which puts us practically within speaking distance of the great British colonies in the Antipodes, and ties Australia to us and to England by another and an important tie. I have heard it said that this plan of Mr. Chamberlain is one that is to be imposed upon the colonies. In this, actions are taken at the request of the colonies, as the resolution passed at the conference of the empire by the colonial Premiers attests. It is our plan, for ourselves, for the empire.

May I say one word as to a certain opinion which was recently expressed in the *Boston Herald*. I do not believe that the opinion there expressed emanated from any responsible party. Rather would I believe that it emanated from some one who was irresponsible and unthinking. The opinion is expressed in these words:—

"But the indications are that the awakening of American statesmen has come; the contest is on, and the grand prize is Canada, nominally commercial Canada, but actually the political dominion."

Sir, I should be less than a Canadian if I did not for my own people resent this expression of opinion. What would you think of Canadians, of their national pride, of their patriotism, if that did not stir them to the core. Supposing to-morrow a country twenty times the size of yours in population, in wealth, in strength, made any such proposal as the one I have quoted. What would be your answer? Sir, it would stir to intensity every fibre of your being. You would sing "My Country, 'Tis of Thee" with still greater energy than you have sung it to-night. You would raise the Stars and Stripes, the flag you love, still higher and nearer to the blue. You would light the fires of patriotism upon every elevated spot from Bunker's Hill to the Golden Gate, and by the memory of all the great heroes whose fame is found recorded in the pages of your national history from Washington to McKinley, you would swear anew allegiance to the flag you love.

Sir, in the cheers with which you greet my words is to be found the answer of Canada, for Canada is British, her people are British, her hopes are British, and she believes it to be her duty to contribute her influence, be it great or be it small, towards the perpetuation for all time of British institutions upon the continent of America.

Permanency Not Guaranteed.

One thought more. If to-morrow Canada were to consent to change all her plans, desert her claims of trade which have cost her so much to secure, give up her hold upon the markets which she now has, and join with you, what do you guarantee her in the way of permanency. Nothing at all. When all our lines are down again, when the course of our commerce at your request has been changed, when we have deserted old friends for new ones, then some fine morning we should probably awaken to find that, as in 1866, our market with you had ceased, only it would be more serious now than then, because in the meantime our industries would have been ruined.

And to the end of perpetuating British institutions here, it is our desire, yea, more, our determination, to build a great auxiliary British nation upon the northern half of this continent.

Canada's Resources.

What are our materials?

There are nearly four million square miles of territory, one-third of the British Empire, a territory larger than your own. Institutions as free as any under which men live to-day. A system of education which prepares alike the poor and the rich

(*Concluded on page* 446).

Transportation Department

DEMURRAGE, CAR RENTAL OR CAR STORAGE.

The approach of a definite—it is hoped a satisfactory—adjustment of this vexed question, suggests an impartial criticism of the rules under which railway agents are working.

Meaning of Demurrage.

The term "demurrage," though at one time generally used in Canada, has been allowed to fall into disuse, being superseded by the two less comprehensive terms "car rental" and "car storage," each expressing distinct phases of demurrage. The abandonment of a term as representing a regulation familiar—though possibly never acceptable—to the public, is probably due to a decision of one of the courts of the Western States in a demurrage case. This decision did not take account of the changes to which the meaning of words may be subjected, and held that demurrage was properly applicable to water transportation, ships and shipping. As concisely expressing the idea of improper detention of property with a resulting charge or penalty, the term is reasonably applicable to the detention of cars, particularly so where practice has given it the wider acceptation. Of the expressions which have superseded the time-honored term "demurrage," "car rental" means a charge for the detention of cars awaiting loads, while "car storage" refers to the detention of cars with loads, either in the shipping or receiving of freight. The main objection to demurrage (the comprehensive expression is used) is largely due to the fact that it smacks of a penalty, though, possibly, too, a strong objection lies in the one-sided nature of the demurrage regulations. Another objection, equally strong, is that the administration seems frequently to fail to manifest sympathy for the difficulty of the shipper or consignee in loading or unloading cars.

Attitude of Public.

Viewing the question from all its aspects, it is safe to say that the public, speaking generally, are not averse to, and do not question the legality of, the charge for the detention of cars. The public cannot be blamed for objecting to the regulation when it seems to be wanting only in an appreciation of their difficulties. The rules make it necessary that, whether right or wrong, though the case may be clearly against the railway, the charge must be paid and a case submitted for the adjudication of a third party appointed by the railway, though not necessarily acceptable as an arbitrator to the shipper concerned. This third party, too, seems to be placed by the railways, who nominate him to his office, in the position of having to concern himself with the monetary showing of his department. The arbitrator is thus in a double degree objectionable; his appointment is from the railways, and he is responsible for the financial showing of his department. There is a third difficulty, which will become more serious, and that is the location of the offices of the Car Service Department in Toronto, remote, as it is, by a thousand or more miles from some of the points concerned (e.g., Halifax). Weather conditions and local conditions, for which an intelligent local railway officer would reasonably and without hesitation make allowances, for such he is not permitted to make allowances. The public are required to pay the demurrage and file claims.

The difficulties with regard to the administration of demurrage rules are probably not wholly known to the average railway officer. These cannot be consolidated into the experience of individual railway men any more than they are consolidated into the experience of one shipper, but many of the difficulties with which the shipping public are confronted have been brought to the notice of this department, and to some of them reference will be made as discussion of these rules progresses.

Current Rules.

The current rules were issued on the 6th of October, 1902, and are known as the Amended Car Service Rules, No. 4, of the Canadian Freight Association.

Application of Demurrage.

Rule No. 1 reads as follows:—

> All freight shipped in carloads, or less, handled by shippers or consignees, to or from all points on the various lines entering into this arrangement, is subject to Car Service or Car Storage Charge, in accordance with the following regulations.

This rule provokes no discussion. If car service charges are to be imposed, it is quite right that they should be imposed upon all carload or less than carload property for the loading or unloading of which the shipper or consignee is responsible.

Unloading.

> Rule 2. A charge of one dollar per car per day, or part thereof, shall be made for the use of the track and delay to cars containing inwards freight handled by owners—caused by failure of consignee to unload within two days after the car is placed for unloading, not including Sundays or legal holidays, and the days on which the Car Service Committee, through the Manager, may waive car rental on account of weather conditions.

Rule 3 may be considered a companion rule to the above, and it is quoted here that the two may be considered together.

Loading.

> Rule 3. Two days will be allowed for loading cars of outwards freight, after said cars are placed for loading, and a charge of one dollar per car per day, or part thereof, shall be made for the use of the track and delay to cars after the expiration of that time, not including Sundays and legal holidays, and the days on which the Car Service Committee, through the Manager, may waive car rental on account of stormy weather.
>
> (a) The legal holidays herein excepted are: New Year's Day, King's Birthday, Good Friday, Dominion Day, Labor Day, Thanksgiving Day, Christmas Day, and such other days as may be made legal holidays by the proper authorities.

The Charge of One Dollar.

The first thought which occurs in the criticism of these two rules is not regarding the charge of one dollar per car per day. It is with regard to the period allowed for unloading or loading. The railway people explain that the charge does not recompense them for detention to cars. This explanation is accepted as reasonable by those acquainted with railway operations. Given a reasonable time allowance for the loading or unloading of cars, complaints should not be made that this charge is itself excessive. It is implied in all the conditions surrounding transportation that the time for loading or unloading shall be reasonable. This is implied in the rate which covers the service.

Improvements in Transportation.

Frequently it has been urged from the railway point of view that with the ever increasing despatch by railways in handling traffic, it is only reasonable that the consignees and shippers should be prepared to respond by facilitating release of car

equipment. As railway operations become more and more improved, despatch naturally increases. It would have been ironical to designate as despatch the transit of freight between points under old and crude transportation methods. In fact, the same may be said even to-day with regard to the movement of traffic in some localities. The despatch of traffic, or the reasonable and due diligence in the carriage of traffic which railway companies are expected to accord, is not related in any pronounced respect with the unloading or loading of traffic. Despatch to-day, too, is not so much the handling with celerity isolated shipments as a uniformity of service on the line and in terminals. The better handling of freight to-day is a measure suggested quite as much by railway economy as for the benefit of the shipping public. This matter must not be viewed from the standpoint of the prompter service which the railways are giving to-day as compared with the service of years ago. It must be looked upon from the standpoint of what can reasonably be expected from the average shipper and consignee in the loading or unloading of property, the average conditions, etc., under which property is loaded or unloaded and, sometimes equally important, the size of the car (including the minimum weight) which the shipper is expected to load or unload. Here it may be remarked that as compared with the car equipment of some years ago, when the loading capacity of cars, or the minimum weights, ranged from 20,000 to 24,000 lbs. for heavy commodities, the minimum weights to-day for the same commodities will vary from 30,000 lbs. up to (in some cases) the loading capacity of the cars; in other words, to the capacity of the car itself, which may run from 40,000 to 60,000 and 80,000 lbs.

Coal, Coke, Lumber, Etc.

The railways have manifested a disposition to enforce the prompter loading and unloading, particularly of the heavier commodities, because coal, coke, lumber and commodities of that character were previously allowed, even where the low capacity cars were being used, a period of three days for unloading (the present time is two days). Thus in spite of the largely increased carrying capacity of cars and the impossibility of advancing the facilities for loading or unloading step by step with the increasing size of cars, the time for unloading is reduced, where these larger cars are now used, to a period of two days. A great deal of complaint is made on this phase of the subject, and it is confidently expected that the Railway Commission, before whom this matter must be finally placed, will see the reasonableness of the contention of the public and concede what is conceded elsewhere (in the United States), the longer period for the unloading and loading of these rougher and heavier commodities.

Continuous Access to Cars.

Objection is also made that the rules do not require the railways to give free and undisturbed access to the cars during the period specified for loading and unloading. If cars are rendered inaccessible through improper placing, on account of shunting, or other obstruction beyond control of shippers or receivers, allowance should be made for the time during which cars are not accessible.

Holidays.

Sundays and legal holidays are naturally excepted, though Saturday afternoon, in which it is now practically impossible, in the larger centres at least, to secure men for the loading or unloading of cars, still continues to be charged for as a portion of an ordinary working day.

Weather Conditions.

The Manager of Car Service is authorized to make allowances for weather conditions, but, as stated above, it is difficult for him to do this intelligently where he is so far removed, as frequently he is, from the scene of the trouble.

Notice of Arrival.

Rule 4. Consignees will be allowed 24 hours after notice of arrival in which to pay charges (if any) and give orders for special placing or delivery. If not then ordered for special placing or delivery, the car will be considered as waiting orders for placing or delivery, and must be unloaded within the two days thereafter, or be subject to charge for the delay.

The extra time after notice of arrival for paying charges and ordering, above authorized, will not apply on cars consigned to designated tracks, or to special or private sidings, or where agents have previous or standing orders or arrangements for placing and delivery on arrival.

Consignees should be promptly notified of arrival of their freight, and cars should be promptly placed for unloading in their regular order of arrival if possible.

Consignees will be held to have been notified when notice of arrival is delivered at their address or place of business, or if consignees are not known, or residing at a distance, when the notice is mailed to the address given on the way-bill.

This rule, it will be observed, seems to give an additional time for the purpose of paying charges and placing order for delivery over and above forty-eight hours or two days provided in Rule 2 for unloading. It is noticed, too, that the free time referred to in Rule 2 seems to follow upon the delivery of advice, though it is safe to say that few railway agents so understand it, and fewer take the trouble to keep an exact record as to the time the advice is delivered.

Nature of Notice.

The difficulty of the public, outside of the views expressed above regarding the one-sided nature of the rules, arises from the ambiguous wording of the rules and the want of a clear understanding on the part of the railway people themselves as to what these rules mean. It should be required, first, that a notice of arrival be given, and that the notice be in writing and delivered, the time of receipt being entered upon the railway advice book, so as to remove a fertile cause for complaint. If the railway resort to a postal advice, additional time should be allowed for the reasonable average time of transmission through the mails, that the party thus receiving the advice shall not be handicapped. This plan is regarded with favor by some of the State Commissioners of the United States. It is in effect in some of the States, Florida, North Carolina, etc. Some of these State Commissions go further and require that if the consignee is able to make oath that the advice was not received by him through the mails, demurrage starts only from the time at which the advice note is received.

Private Sidings.

Extra time is not allowed in the case of goods consigned to private sidings or for which standing orders for placing have been filed by the consignee. Here, again, a difficulty arises due to the ambiguity of the rule, because many of the railway agents consider that cars consigned to an individual who has a private siding are not entitled to extra free allowance for advice of arrival, though undoubtedly they should be if a standing order for placing is not given.

Re-switching.

Rule 5. Consignees receiving cars to be recarded to any yard or siding for delivery to another party, will only be allowed one day after notice of arrival in which to give such orders, and for all time in excess of that the original consignee shall pay one dollar per car per day, or part thereof, so that two days may remain to the party actually taking delivery.

(a) Agents must decline to take orders for the disposal of such shipments until the car rental is paid by the original consignee, or by the party taking delivery, if in excess of the time limit.

(b) This rule will also apply on cars ordered by consignees for delivery on the sidings of connecting lines, and on transfer bills to connections for such cars, agents will note: "Two days remain for unloading."

Railway Practice.

Practice may have demonstrated to the railways the advantage of preserving to the ultimate consignee, where cars are switched from siding to siding in a terminal, not less than two days for unloading. Practice may have demonstrated the advisability of assessing demurrage upon such cars after the expiry of twenty-four hours, where not ordered to be placed. But should not the delivery be considered as a unit, disregarding the ordering from siding to siding and the fact that the property may have been transferred from one consignee to another? Should not free time count until free time actually expires, demurrage being collected from the party who takes delivery? This may not be a point of sufficient importance to warrant prolonged discussion, though a provision should be made that, where a car is ultimately unloaded within the free time allowed, whether two days be consumed in ordering and one in unloading, or one day in ordering and two in unloading, demurrage, if collected, should be reclaimable.

Rule 6 is one about which the public does not need to concern itself.

Interchange Switching.

Rule 7. Cars ordered by consignees to tracks or sidings of a connecting or switching company for delivery prior to the expiration of one day after notice of arrival will be free of car rental (so far as said consignee is concerned), but where consignees delay cars by failure to pay charges, filing orders, etc., the agent of the initial road shall collect rental for such detention in excess of one day before accepting orders to forward, so that the free time under the rules may apply to the party actually unloading on the tracks of the other company.

(a) This rule will not apply on cars moved from one track to another on the same road for the convenience of the consignee. On all such cars time must be computed from the original placing.

This rule is directly related to Rule 5 and sub-sections, upon which remarks have been made above.

Blockades or Congestion.

Rule 8. In cases where a connecting or switching road refuses to accept cars on account of the inability of the consignee to receive and unload, the agent holding such cars should promptly notify the consignee, and charge car rental from the expiration of the ordinary free time allowed according to the rules, provided owner, on notification, does not furnish final and practicable orders for disposal within the free time limit.

Two Phases of Transportation.

This rule deals with two distinct phases of transportation; on the one hand, the relationship between connecting carriers, and, on the other, relationship between the railway completing the transit to the point of destination and the switching road by means of which it may ordinarily be the practice to deliver to certain consignees.

Switching Railways.

Dealing first with the last-mentioned phase, it does not seem unreasonable for a switching railway to decline to have its facilities congested with a traffic upon which it could earn but a switching charge. It would not be illegal to do so unless violating a bill of lading contract. While every railway might consider itself entitled to the privilege of taking care first of that traffic which it has itself hauled into the terminal point, it might be reasonable to expect, even for a switching service performed at a fixed charge per cent., that the terminal facilities of a railway should be equal to the demands that are likely to be placed upon them. Again assuming an absence of bill of lading contract, it might be reasonable for the switching railway to decline to accept traffic for an individual or firm because the facilities of that individual or firm for unloading are already overtaxed. It would certainly place the consignee under a hardship, like the second phase of this question, if he were required on account of congestion to take delivery of his property from the track of the railway carrying that property into, say, Montreal. In any case, if the consignee is not responsible for the congestion, and the railway or railways are, if the enforced delivery adds to the length of the cartage or other difficulties, involving the necessity of a wider time allowance for unloading the time allowance should be reasonably increased. This opinion is based upon the views expressed by railway officials, that car rental is not imposed for revenue purposes, but for facilitating the unloading of cars.

Connecting Carriers.

The first phase of this question is the relationship of connecting railways to the traffic of an individual whose facilities it is claimed by the delivering road, are over-taxed, and here may be distinctly stated that a hardship would likely accrue to the consignee if his property were held up at a junction point in transit, instead of being brought to its destination as required by the contract made between the shipper and the originating railway at the point of shipment.

Legal Question.

The legal side of this question should not be overlooked. (a railway notify another railway that it will not receive tr for any individual unless that notice is issued in time to vent shipment and the signing of a contract or bill of la On the one hand, the latter would require that the cont should be carried out with due diligence, and, on th there is the assumption, first, that the delivering r terminal track facilities equal to all demands wl placed upon it, and, in the second place, the fact that reg of how many cars one consignee may receive, he is enti have his shipments which may be on the line, all of wh covered by distinct contracts, carried to the destination cordance with the contracts. It would be an unfortunat ter if railways were permitted, in face of their legal obli and signed contracts, to decline to handle traffic for each for specific firms on account of congestion, actual or alleg which, in some cases, on account of the bunching, or for reasons, the railway issuing the blockade notice may be responsible.

Should Demurrage be Charged.

If such notices are in any case warranted, and are auth to be issued, it should be understood that no demurrage sh charged, as demurrage cannot properly commence to accrue the free time limit expires after property is received contract destination. Again, the avowed purpose of th ways for the demurrage charges may be referred to, a should be understood that no consignees shall be asked to demurrage which arises entirely from the inability of the riers to complete the contract or for other reasons for the carriers are responsible.

Formal Notice to Consignee.

Where a switching road is under the necessity of dec to switch traffic for a firm or individual, the railway h the property should be required to notify the consignee t effect. In some of the United States a notice after the f ign fashion is required:—

"We are holding on our tracks cars (giving numbers and initials), subject to your orders or for your unloading, and car service will be assessed thereon at the rate of a dollar per car per day after the expiry of twenty-four hours from the first 7 a.m. after the receipt of this notice, and any car service that may accrue must be paid before any unloading of the freight will be allowed or before car will be delivered to another connection."

Rules 9, 10 and 11 are not subject to discussion.

(To be Continued.)

ASCERTAINING THE COST OF PRODUCTION

A Simple, Economical and Accurate System for Keeping Factory Records in a Printing and Book-binding Establishment

By E. J. HATHAWAY

Every manufacturing establishment should have a system for ascertaining the actual costs of production. There are many systems in use, but perhaps none that is applicable in its entirety to all lines of business. There are, however, certain general features that govern all such systems and which may be adapted to any line of manufacture with but little variation.

The chief desideratum in a factory cost system is simplicity. It should be easily understood, economical in operation, and its importance to the business should be recognized by every employee. The difficulty with most factory systems is that they are too complicated. They attempt to give too much—much that is unnecessary—and they are too expensive in the handling.

The following system of ascertaining the cost of work is used in one of the largest printing and bookbinding houses in Canada. It is the natural development of many years of experience with cost systems, and is a simple economical and accurate record of all work passing through the factory.

A work docket, giving the general particulars, description of work, record of paper to be supplied, time promised and other such information, is written in duplicate, the original (Figure I) going into the factory with the work, and the duplicate (Figure II) remaining on a loose-leaf file in the office.

Every producing employee in the factory is required to hand in a work ticket (Figures III, IV and V) each evening, showing a record of his work during the day, giving the docket numbers of the one or more jobs on which he has been engaged, the nature of the work where practicable and the time actually employed on each. The records from these tickets are posted in the office each day to the duplicate of the docket, according to the several branches of the work, each item being checked off on the ticket as it is entered, the workman's number appearing above and the value of time charged below. (Thus in Figure VII. the first entry under composition 42/60, indicates that

a 3-25 JOB WORK DOCKET ORIGINAL No. J 1255

National Publishing Co. DATE Aug. 1 1903

WANTED August 20th Ottawa

DESCRIPTION:

1,000 booklets, 6 x 9. 16pp.
L.P. type - black ink.
Cover ptd. two colors - wire stitched.

CHARGED ... 190 ... AMOUNT $

STOCK SUPPLIED WITH DOCKET	$	C	TOTALS
R. 1 Q. 1 S. 80 No. 1 25x37 PER RM. $ 4.40			
R. 10 Q. 6 S. 50 R. mist grey $ 10.00			
R. Q. S. $			
COVERS PER $			
PRINTING COST — COMPOSITION FROM WORK TICKETS			
PRINTING COST — PRESSWORK FROM WORK TICKETS			
PRINTING COST — COST OF INK			
BINDING COST — LABOR FROM WORK TICKETS			
BINDING COST — MAILING AND POSTAGE			
BINDING COST — STOCK SUPPLIED			
OUTSIDE WORK — PRINTING			
OUTSIDE WORK — BINDING			
TOTAL COST			

FOREMAN PRINTERY FOREMAN BINDERY

REGISTER, PAGE ... 190

CLERK OF FACTORY

I

3-25 JOB WORK DOCKET DUPLICATE No. J 1255

National Publishing Co. DATE Aug. 1 1903

NTED August 20th Ottawa

DESCRIPTION:

1,000 booklets, 6 x 9, 16pp.
P. type - black ink.
Cover ptd. two colors. wire stitched.

CHARGED ... 190 ... AMOUNT $

STOCK SUPPLIED WITH DOCKET.	$	C.	TOTALS
R. 1 Q. S. 80 No. 1 25x37 PER RM. $ 4.40			
R. 10 Q. 6 S. 50 R. mist grey $ 10.00			
R. Q. S. $			
COVERS PER $			
COST OF LABOR FROM WORK TICKETS — MPOSITION			
ESSWORK			
INDING			

II

COMPOSING ROOM DAILY WORK TICKET

CHECK NO 42 TORONTO August 5, 1903

NAME John Smith

DOCKET NO	COMPOSITION H	COMPOSITION M	DISTRIBUTION H	DISTRIBUTION M	MAKE-UP H	MAKE-UP M	AUTHOR'S ALTERATIONS H	AUTHOR'S ALTERATIONS M	ALTERATIONS ON PRESS H	ALTERATIONS ON PRESS M
~~1255~~	2	30								
~~1175~~	1	45		30						
~~1243~~	2			15						
~~753~~				15						
OVERTIME										

TIME 9 1/2 HRS. OVERTIME ... HRS. TOTAL TIME 9 1/2 HRS.

TIME MUST BE FILLED IN WHEN CHANGING WORK G. J. Foster SUPT. PRINTING DEPARTMENT.

III

PRESS ROOM DAILY WORK TICKET

CHECK NO 75 TORONTO August 5, 1903

NAME George Brown

DOCKET NO	PRESS NO	IMPRESSIONS	MAKE READY H	MAKE READY M	FEEDING H	FEEDING M	STANDING H	STANDING M	STANDING WHIT
~~1143~~	4	2000	1		2	30			
~~1180~~	4	750		30	1				
~~1155~~	4	1000	1		3			30	Corrections
OVERTIME									

TIME 9 1/2 HRS. OVERTIME ... HRS. TOTAL TIME 9 1/2 HRS.

TIME MUST BE FILLED IN WHEN CHANGING WORK G. J. Foster SUPT. PRINTING DEPARTMENT.

IV

compositor No. 42 has worked on docket J 1255, to the value of sixty cents.)

No. 125 August 5, 1903 3

BINDERY WORK TICKET

NAME Mary Jones

DOCKET	HOURS	MIN.	DOCKET	HOURS	MIN.
J. ~~1023~~	3	30			
J. ~~1012~~		45			
TOTALS: HOURS	4¼	@ 12	$ 51		

DOCKET	DESCRIPTION OF WORK	RATE	AMOUNT	
G. ~~755~~	3,000 – 3 fold.	25		75
	TOTAL			

NOTE GIVE EXACT TIME OCCUPIED ON EACH DOCKET; FILL IN WHEN CHANGING WORK. KEEP YOUR TICKET NEAT AND CLEAN

CERTIFIED BY C. Johnson – FOREMAN

V

As this file of duplicate dockets contains only those of work actually in hand, it may be handily referred to at any time for information as to work in progress without the necessity of searching through a number of departments, and a little familiarity with employees' numbers will enable one to know at any

a 3-25 JOB WORK DOCKET. (ORIGINAL) NO. J 1255

National Publishing Co. DATE Aug. 1 1903

WANTED August 20th. Ottawa.

DESCRIPTION:

1,000 booklets, 6×9. 16pp.
L.P. type. black ink.
Cover ptd. two colors, wire stitched.

CHARGED Aug. 21 1903 AMOUNT $ 40.00

		$	C	TOTALS	
STOCK SUPPLIED WITH DOCKET.					
1 R. 1 @ 80 No. 1 25×37 PER RM. $ 4.40		4	62		
R. 10 @ 6 $ 50 R. mut grey " $ 10.00		5	12		
R. @ $ " $					
R. @ $ " $					
COVERS PER $				9	74
PRINTING COST	COMPOSITION FROM WORK TICKETS	9	07		
	PRESSWORK FROM WORK TICKETS	3	11		
	COST OF INK	65		12	83
BINDING COST	LABOR FROM WORK TICKETS	1	72		
	MAILING AND POSTAGE				
	STOCK SUPPLIED	35		2	07
OUTSIDE WORK	PRINTING Electro 60				60
	BINDING				
TOTAL COST				25	24

W. J. Foster – FOREMAN PRINTERY C. Johnson FOREMAN BINDERY

ENTERED IN REGISTER, PAGE 354 August 21 1903

H – CLERK OF FACTORY

VI

time almost the exact condition of the work on any particular job.

When the work on a job is completed in any department, the docket is passed on with the work to the next branch, the foreman first entering in the proper column the value of the ink or other materials that may have been supplied from his stock; and when a job has finally been delivered to the shipping room the docket passes into the office, where the amount of labor is made up on the duplicate, transferred to the original, and the actual cost of the job ascertained. (Figure VI.)

To the actual cost of production, covering materials and producing labor, must now be added the percentage covering management, maintenance, and other working expenses, in order to find the net cost of the work. The docket as now completed is sent to the invoicing clerk, to be marked with the date of charge and amount, for purposes of reference, and then filed in an alphabetical index. The duplicate (Figure VII) is filed in a corresponding numerical index, and thus ready reference may be made to any particular job by name, number or date at any time.

A System That Has Proven Its Value by Actual Trial.

This docket system has now been in use for some years and has in every way proven highly satisfactory. Its advantages over the crude and immature systems in general use are man-

a 3-25 JOB WORK DOCKET. (DUPLICATE.) NO. J 1255

National Publishing Co. DATE Aug. 1 1903

WANTED August 20th. Ottawa.

DESCRIPTION:

1,000 booklets, 6×9. 16pp.
L.P. type – black ink –
Cover ptd. two colors. wire stitched.

CHARGED 1903 @ AMOUNT $

	$	C	TOTALS	
STOCK SUPPLIED WITH DOCKET.				
1 R. 1 @ 80 No. 1 25×37 PER RM. $ 4.40				
R. 10 @ 6 $ 50 R. mut grey " $ 10.00				
R. @ $ " $				
R. @ $ " $				
COVERS PER $				
COST OF LABOR FROM WORK TICKETS				
COMPOSITION 42/60 25/76 34/178 55/65 24/72 34/124 9/72 13/140 25/140			9	07
PRESSWORK 75/125 64/76 72/75 75/40			3	11
BINDING 34/40 65/33 70/55 65/44			1	72

VII

ifold. Its operation is removed from the hands of departmental foremen, who are liable to error in the handling of accounts, and costs of labor are made up by an independent clerk.

It is a ready check on all estimates, as it contains the costs of paper, labor by departments and materials, the elements entering into all properly prepared estimates. The dockets giving actual results are always accessible in cases of request, for new estimates or repeat orders. Errors on the part of employees in making out their work tickets can easily be traced, and excessive costs of labor in any department can readily be located and accounted for.

The file, with its "live" dockets, is a daily record of the work in hand and its present condition. It provides an easy means of locating jobs that had been unduly delayed and of answering the varied inquiries for work while in progress.

This system of ascertaining factory costs of production has proved of inestimable value to the printing and binding house in which it is being used. It is inclusive in its scope, yet it is so simple in its operation that it is readily understood, and requires little time on the part of employees for filling in the required data. To the line of work to which it is applied it has overcome many of the difficulties which seem to affect the various methods of securing accurate records of costs of production. It is inexpensive both in its installation and in its operation, and has proven its effectiveness in actual trial—a trial

Canadian Boards of Trade

British Preference Only via Canadian Ports.

The following resolution has been adopted by the Maritime Board of Trade, and the local boards throughout Nova Scotia and New Brunswick have been asked to lend the movement their support.

"Whereas, under our present tariff the preference of 33⅓ per cent. on British goods applies to merchandise imported via foreign ports, as well as to goods coming direct through Canadian ports, and in consequence of this a very large proportion of goods destined for Canada under this law, is received through foreign ports, to the detriment and loss of Canadian commerce.

"Resolved, that the government of Canada be asked to apply the rebate only to goods coming direct to Canadian ports, so that our ports and transportation companies may be built up by the business of our own country."

Express Companies and the Railway Commission.

On the question of bringing the express companies under the control of the Board of Railway Commissioners, the Halifax Board of Trade has expressed itself in the following terms:

"Whereas, the Board of Railway Commissioners has control of the transportation rates for merchandise charged by the various railway companies operating in Canada, but has not control of the transportation rates charged by the express companies for the same purpose;

And whereas, the relation of the shipper to the carrier is much the same in the shipment of goods by express as when shipped by freight, similar conditions governing both cases, and it is but reasonable that both should be subject to the same control,

Therefore, resolved, that this, the Halifax Board of Trade, respectfully ask the government to amend the railway act so as to place express companies in Canada under the control of the Board of Railway Commissioners in the same manner as the railway companies."

Quebec's Annual Meeting.

The annual meeting of the Quebec Board of Trade was held on January 18th. Complaints were made against the harbor and wharfage dues of the port, which are said to discriminate in favor of Montreal as against Quebec. The alleged discrimination of the railways against Quebec was also complained of.

It was decided that the government should be appealed to for the construction of a second graving dock at Quebec, preference to be given to a site at Spencer Cove. It was pointed out that last year vessel owners had to send their ships to Halifax for repairs at great risk, or to make only temporary repairs at Quebec, because of the only graving dock being occupied. The question of winter navigation of the Lower St. Lawrence was also considered, and recommended to the attention of the government.

The election of officers for the current year resulted as follows: President, William Power, M.P.; 1st Vice-President, Geo. E. Amyot; 2nd Vice-President, T. S. Hethrington; Treasurer, E. E. B. Rattray.

A Bonus on Copper.

At a recent meeting of the Rossland Board of Trade the following resolution was unanimously adopted:

"Resolved that in view of the great disadvantages which gold-copper mining is laboring under in this province, and the vast revenue derived from it by the Dominion government, the Rossland Board of Trade do take steps to petition the Dominion government to grant a bonus on copper as it has done on lead and iron, and that this board shall, as a preliminary step, invite the co-operation of the various Boards of Trade throughout the province, with a view to presenting a unanimous memorial through the representatives in the Dominion parliament."

In debating on the subject, it was stated that the copper miners were taxed very large sums in the way of customs duties annually in order to protect the eastern manufacturers. It was held that this being the case, the manufacturers should be taxed a little to pay a small bounty on copper. It was shown that while the gold-copper mines have paid dividends of $2,500,000, the silver-lead mines have paid $3,500,000. If the lead miners are entitled to a bounty under such circumstances, the copper miners should be treated likewise, and this is particularly the case when it is known that the copper miners have a much larger quantity of capital invested than the lead miners.

Traders' Week in Toronto.

An agitation is on foot in Toronto looking to the establishment of a Traders' Week, somewhat along the lines of Traders' Week in New York and other cities in the United States. The Board of Trade have taken the matter up and are endeavoring to secure the necessary concessions from the railway companies. The idea is to have some particular week set apart, once, twice or perhaps oftener every year, when retailers from all over the Dominion may visit the city to make their purchases. The first essential to the carrying out of such a plan is to secure reduced fares. It is pointed out that the railways might well afford to grant liberal reductions, first, because their passenger traffic would thereby be greatly stimulated, more than compensating them in gross receipts for any reductions made on individual fares, and second, because of the much larger volume of freight to be carried as a result of the purchases made on such occasions. To the wholesaler or manufacturer, Traders' Week would afford a splendid opportunity to meet one's customers, to get in touch with them, and to learn the peculiar circumstances surrounding the business of each. To the buyer it would present the advantage of being able to visit the city at a cost which would not be too great a strain on his business and at a time when he would be sure of finding the wholesaler at home He would be able to buy more intelligently because he could make his selections from complete stocks instead of from samples only. The general advantages to the city that would accrue from the inauguration of a Traders' Week are at once obvious. It would receive visits from many who had previously been strangers to it and who had done their buying elsewhere. These in turn would advertise it among their friends, thus making themselves agents in turning still more business Toronto-wards.

The Toronto Branch of the Canadian Manufacturers Association has been co-operating with the Board of Trade in endeavoring to secure reduced rates from the railways for Traders' Week, but up to the present time have received no encouragement.

With a view of stimulating interest in the subject, the Toronto Branch, at its weekly luncheon held on January 18th, selected for the topic of discussion "Traders' Week in Toronto." The subject was dealt with in a very valuable paper prepared by Mr. S. C. Mead, Secretary of the Merchants' Association of New York. The Traders' Week in New York has, from its inception, been identified with this important association of business men, and has become a spring and fall feature of New York's shopping season. Buyers are attracted from all parts of the United States and Canada to the benefit of the railways, manufacturers, wholesalers, retailers, and the city generally.

It will depend on the railways whether or not similar Traders' Weeks are made a feature of Toronto's distributing trade.

Steamship Service to Prince Edward Island.

The Charlottetown Board of Trade have protested in most vigorous terms against the proposal to renew the mail contract with the Charlottetown Steam Navigation Co., and other maritime boards are being asked to support them in the following resolution, which they have unanimously adopted:—

"Whereas, it has been reported in the newspapers that a proposition is now before the Government to renew the contract with the Charlottetown Steam Navigation Company for carrying mails, passengers and freight between Prince Edward Island and the mainland for a period of ten years:

"Resolved, That the Charlottetown Board of Trade respectfully but vigorously protest against the renewal of the said contract, either with the Charlottetown Steam Navigation Company or any other persons, until the various interests affected are consulted.

"This Board is of the opinion that the time has arrived when in the best interests of all concerned the steamboat service between Prince Edward Island and the mainland should be taken over by the Federal Government and operated both winter and summer as a ferry service in connection with the Government railway by boats provided with mechanical refrigerators, or if the service is to be maintained by boats subsidized by the Government, then the passenger and freight rate should be under the control of, and fixed by, the Government, so as to place the Province of Prince Edward Island on a footing of equality with the other Maritime Provinces in respect of passenger and freight rates."

Closed Season in Salmon Fisheries.

The New Westminster Board of Trade have protested to the Dominion Government, in the strongest possible terms, against the proposals of the British Columbia canners, with reference to establishing a closed season during the years 1906 and 1908. They consider that the canners in making recommendations to the Government along this line have been prompted by purely selfish motives; that their object is to put up a very large pack this year, counting on a heavy run of fish, so that in 1906, with no expenses of canning to meet, they may receive the regular price for salmon bought from the fishermen at a reduced figure. They also expressed themselves as being strongly opposed to any measure tending to reduce the up-river limits, favoring rather the plan of clearing the mouth of the river, so as to place no obstacles in the way of the salmon reaching the spawning grounds.

TRADE OF THE YUKON.

Bradstreet's, of January 5th, 1905, draws attention to the fact that in Yukon last year the balance of trade in favor of Canada by the White Horse Pass route was $2,643,622, as against $1,994,539 for the year 1903. In the early days of that mining camp trade was very largely in hands of United States firms. The possibilities of its market were set forth by INDUSTRIAL CANADA in the form of valuable reports prepared by Messrs. Geo. H. Hees and S. M. Wickett, the former in August and the latter in October, 1902. It should be a matter of some satisfaction to members of the Canadian Manufacturers' Association to know that, as a result of information contained in these reports, and the energy that has since been displayed by Canadian manufacturers, producers and merchants, the trade of the Yukon is now being more and more diverted into purely Canadian channels.

BUSINESS OPENING WANTED.

Mechanical engineer, having executive ability and 14 years' experience with large manufacturing concerns in Canada and United States, desires to become financially interested with some suitable manufacturing concern in the capacity of Manager or General Superintendent. Address replies to Box G, INDUSTRIAL CANADA, Toronto.

THE LATE MR. J. B. HENDERSON.

It is with deep sense of loss that we record the death of Mr. J. B. Henderson, the late Manager of the Penman Manufacturing Company, Limited, of Paris.

Mr. Henderson was born at Ancaster, Ontario, about fifty years ago, and for the past thirty years has been actively identified with the progress of Canadian industries. For many years he has been one of the most prominent figures in the Canadian woollen industry, and for the past twelve years has been Manager of the Penman Company, which is to-day the largest manufacturing plant of its kind in America.



THE LATE J. B. HENDERSON.

Mr. Henderson's personality and influence will be widely missed. In the town of Paris, where he has lived for the past eleven years, he took an active interest in municipal, educational and church matters. He was, at the time of his death, and for four years previously, a member of the Executive Council of the Canadian Manufacturers' Association and was for two years Chairman of the Woollen Section.

He was a man of broad ideas and sterling character—respected by all who knew him, and beloved by those with whom he constantly associated in business circles.

The sympathy of the Association is extended to the bereaved family and to the company which he served so faithfully.
(Cut to accompany this)

HOW GERMANY IMITATED THE UNITED STATES.

The wonderful industrial progress made by Germany during the past two decades is largely due to the fact that the German Reichstag took the advice of Prince Bismarck and imitated the tariff system of the United States. In a speech made in the Reichstag on May 14, 1882, Prince Bismarck said: "The success of the United States in material development is the most illustrious of modern times. The American nation has not only successfully borne and suppressed the most gigantic and expensive war of all history, but immediately afterwards it disbanded its army, found employment for all its soldiers and marines, paid off most of its debt, gave labor and homes to all the unemployed of Europe as fast as they could arrive within its territory and this by a system of taxation so indirect as not to be perceived, much less felt. Because it is my deliberate judgment that the prosperity of America is due to its system of protective law, I urge that Germany has now reached that point where it is necessary to imitate the tariff system of the United States."

Wellington St. W[illegible] Department will be operated [illegible] cents for every hour so w[illegible]ked.

PEAT FUEL

Something About the Processes Employed in Producing out of Canada's Waste Bogs a Commercial Substitute for Coal

By W. E. H. CARTER

During the past year the problem of manufacturing peat fuel from the very many bogs found all over Ontario into merchantable fuel has received more earnest attention than at any period probably since the boom about a decade ago, when so many entered with zest into the undertaking knowing little or nothing about it and unfortunately losing all their money.

Available Peat Areas.

Much has already been written of the history of the industry in Ontario, and in fact in the whole Dominion and the adjoining territory of the United States, in Government reports (1) and elsewhere, which need not be touched on again. Those interested in the question are probably conversant with the facts.

An additional source of information came out in December of last year in the form of a bulletin from the Geological Survey of Canada, Ottawa, written by Dr. Chalmers, touching on the different processes of manufacture that have been tried in the Dominion and describing some of the best known peat bogs. It gives some interesting figures on the amount of peat lands in the Dominion, placing the total area at 37,000 square miles. It is well to note, however, that no one has as yet determined how much of that vast area west of James and Hudson Bays, known as the Barren Lands, is really peat. From the careful exploration of the southern portion of it by the writer the conclusion was reached that a large portion is nothing better than light moss. However, the day when that source of supply will be drawn on is a long way off yet, and we need concern ourselves at the present time only with those suitable deposits lying close to a railway or other means of transportation, or in the heart of some fairly thickly populated country section where other fuels are scarce.



MAKING MACHINE PEAT.

Success of Peat As a Fuel.

It is a noticeable fact that nearly every article that appears nowadays on peat deals at great length with the success of the fuel wherever and however it has been used and the satisfactory stand it takes when compared with either wood or coal. There is no question about this. We have seen in our own province of Ontario how eagerly peat fuel is sought by all who find it difficult to get an adequate or cheap supply of coal. It is preferred to wood. The problem the peat engineers are up against is not a weak or uncertain market, but as to how that market can be supplied. That it is being supplied in other countries is well known. Last year over 4,000,000 tons of "machine-peat" was made and sold in European countries. This is not a compressed article in the ordinary sense of the word, but the air-dried bricks formed from the masticated wet peat as it comes from the bog. It contains about 25% water, but in spite of this is remarkably dense and hard and capable of being transported in all kinds of conveyances without much loss in crumbling; neither will it absorb moisture to any appreciable extent, and when burning it retains its shape without serious disintegration, much the same as coal. It makes an excellent fuel, is simple to manufacture and has the great advantage of low first cost in plant. The more elaborate and expensive processes by which the compressed peat briquettes are made as in Ontario have not as yet found favor there. For various reasons it has been supposed that the manufacture of machine-peat could not be commercially undertaken in Canada on account of the higher labor cost and the greater distances of transportation and practically all efforts have been confined until the present year to the manufacture of a compressed article from the prepared dry peat. The degree of success with which this first attempt has been attended will be mentioned below.

Extent of Operations in Ontario.

For the past four or five years a commercial article of fuel made from peat has been sold in Ontario, the product in small lots of a number of plants, but only from one on a continuous-commercial-scale. That one plant is at Beaverton. The season's output from it has latterly amounted to between 1,000 and 1,500 tons of peat briquettes. A new plant of double the capacity of this, and employing the same machinery, was last summer completed on a large bog at Caledonia Springs, which lies about half way between Ottawa and Montreal. Preparations have been made to run day and night during the open months of the year, so that it should manufacture over 50 tons a day or between 6,000 and 8,000 tons during the season. Machinery and supplies are also being taken to an extensive area of bog land in the neighborhood of Fort Frances, Western Ontario, to erect a third factory of the same design and capacity as this last one; but it will be a year before this one can be placed in operation. This will supply the Winnipeg market.

At the numerous other peat factories in Ontario, where machines and processes differing more or less from each other have been employed, very little has been accomplished during the past year. With the success of the Dobson factory at Beaverton the companies interested in these other plants appear loath to continue experimenting on their own initiative. As their machinery and methods have not proved commercially successful as yet their determination to sit by for a while and see what the other fellow can accomplish is probably a wise one for themselves. However, out of much experimenting comes some good, and no doubt some of these plants with more or less alter-

(1) Bureau of Mines of Ontario, Toronto. Vols. XII, XIII, Geological Survey of Canada, Report, Ottawa.

up to regular lengths of about a foot. These are placed omatically on wooden pallets and thence conveyed automatic- to drying racks, where they are exposed to the sun and d until dry, that is, until the moisture has been reduced to out 25%. In this condition they have become very hard, hav- shrunk to a quarter or less the original dimensions, and are parently quite dry. This drying operation will require prob- ly five weeks at least, which, for a large output, will necessitate any racks and a large proportion of the capital lying idle. Mr. oore intends if possible to air-dry only to 35% or 40% water these racks, and afterwards complete the operation by arti- l means. Whether this can be done commercially remains to een. If so, there need be no doubt of the success of the whole cess, for with it, as well as all others, the key to success lies in the economic removal of the water from the peat. All other problems fade into insignificance beside this one. However, even with 25% water, the blocks make an excellent fuel. This plant of Mr. Moore's is installed on a peat bog at Victoria Road, about 50 miles north-east of Toronto.

The Dobson Process.

Not a great deal can be added to the information already pub- shed on Mr. Alex. Dobson's machines. His process is quite the me as before, but in the field operations he has attained greater ficiency by improving his machines. The peat, after excava- n and spreading over the surface of the bog in a thin layer to d ry, is now quickly skimmed by the scraper to the tram road n the centre, and then automatically loaded into the tram by an elevator attached thereto. This saves having a couple nen there to load with shovels. In the factory, where two ses or more are to be installed, as at Caledonia Springs and t Frances, the artificial drying will be done in a double cyl- r dryer, having but one fire-box, thereby increasing the effi- y of this part of the operations. But probably the most im- ant improvement is in the press. Hitherto the Dobson bri- quettes, made from the peat bogs around Beaverton, which are decayed water plant vegetation, and not the best, have not been hard enough to resist a certain absorption of moisture from the air, nor to resist disintegration shortly after ignition in the fire. It has been observed that after the first compression in the die the 2½-inch briquette will expand again nearly a quarter of an inch, due to included air and the resilience of the peat itself. In order, therefore, to keep the size, length and density of the bri- quette down to where the punch puts it, each briquette is sub- jected to three compressions by making three of them one on top of the other in a die, before the first is expelled from the bot- m. This will naturally cause the dies to heat up more than rmerly, when but one or two compressions were made in each, d in order to keep the temperature down the six or eight dies each circular die base will be doubled in number in the new chines. This will allow each die time to cool off somewhat fore it comes into action again.

Insufficient hardness or density has been the only drawback the fuel made by the Dobson press. It has been conclusively ved that the briquettes can be turned out for about $1.50 a n, and if the quality can be improved along the lines mentioned, is no doubt that the fuel will sell for a considerably better than hard wood, calorie for calorie, will compete wit hhard coal, and be found satisfactory for all purposes.

Operations at the Caledonia Springs, Fort Frances and Victoria Road factories will be watched with great interest during the coming season, and will certainly have the good wishes for success of this coal-less centre of the Dominion.

The Page Wire Fence Co., of Walkerville, are opening an Ontario Headquarters in the new Millichamp Coyle Building, 84 Wellington St. West, Toronto. From these offices and ware- rooms the Canadian Sales Department will be operated. Mr.

TRADE PUBLICATIONS.

Carriage Tops.—A catalogue of carriage tops and trimmings has been received from D. Conboy, Toronto, who claims to be the largest and oldest top manufacturer in America. All the prevailing styles are illustrated and described, as well as a number of new designs. Some of the novelties shown, such as roller blinds for tops, will be particularly interesting to the trade.

Wood Trimmings and Kitchen Utensils.—To glance through the 1905 catalogue of The P. R. Cumming Manufacturing Co., Limited, Renfrew, Ont., is like meeting an old friend, for on every page are to be found articles with which every one is familiar about the home. Plain, varnished or enamelled handles for pails, pots and kettles, knobs, towel rings, towel rollers, curtain pole trimmings, clothes rocks, hat racks, step ladders, in fact every conceivable kind of wood turning is a staple article with this well known firm. They also display an extensive line of steel kitchen utensils, many of which are exclusive designs covered by patents.

Lithographing.—One of the handsomest of the many calendars with which we have been favored recently came to hand from The Toronto Lithographing Co., Limited. It is deserving of special mention by reason of the fact that it is of Canadian workmanship and material throughout. The general effect is that of a long panel of burnt wood, representing a knight of old, in full suit of mail and with lance at rest, mounted upon a white charger. The resemblance to burnt wood work has been made all the more striking by the effective use of an embossing die. The stock for this excellent piece of work was furnished by Ritchie & Ramsay, Limited, and the Kinleith Paper Co., Limited, and the ink by the Ault & Wiborg Co., Limited.

Metal Ceilings.—We have received from The Galt Art Metal Company, Limited, a copy of their metal ceiling catalogue, which certainly does credit to one of the youngest firms in Canada in this line of business. Their designs are all new and pretty; and as their machines and presses are of the most modern type, they should, with the aid of efficient workmen and good material, be able to put a first class article on the market.

Filing Cabinets.—A large number of handsome office cabinets are illustrated and described in the new catalogue of the Canada Cabinet Co., Ltd., Gananoque, Ont. All the standard lines of letter and document files, stationery, card index and catalogue cabinets, and sectional bookcases are shown, both singly and in convenient combinations. Styles or sizes not shown will be manufactured to order.

Gasoline Engines.—In the introduction to a small advertising booklet, the McLachlan Gasoline Engine Co., Ltd., Toronto, state that no other motive power is so universally suitable to all conditions and requirements, up to certain limits, as the gasoline engine. As a substitute for steam or electric power it has the advantage of being cheaper and safer, and is second only to water power where that is available. The McLachlan Co. show the usual line of stationary, portable and marine engines.

Steel Pressure Blowers.—Sectional Catalogue No. 18, issued by Sheldon & Sheldon, Galt, deals with the subject of steel pressure blowers. These blowers are designed primarily for use in connection with cupola furnaces and forges, but are equally efficient in producing mechanical draft for steam boilers and for pneumatic tube systems. They are made in all sizes, with either one or two pulleys and can be built to discharge horizontally, upward or downward.

Shade Rollers.—The Stewart Hartshorn Co. have published a very pretty catalogue of their shade rollers and accessories. The half-tone work shows some beautiful shading effects, and by means of delicate colors they have imparted to their illustrations a most attractive appearance. This firm has large factories in Eas Newark and Muskegon, but has also been manufacturing i

ation could be now turning out peat fuel at a profit if the money and the brains were obtained and applied.

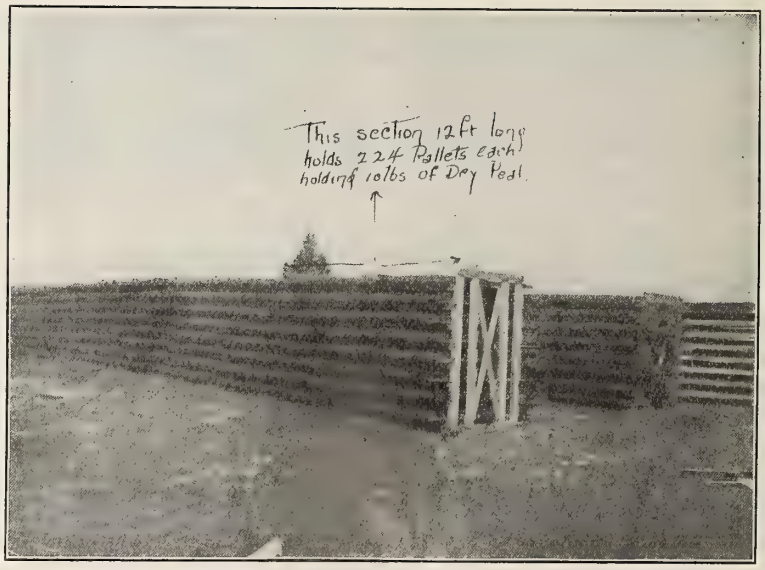
A Word of Caution to Investors.

In many European countries where peat fuel is manufactured the industry is being fostered by the Governments by the subsidizing of national peat societies for the collection and distribution of all possible data relative to the subject. One of the main functions of the engineers employed by each is to examine into the new patented processes and unless these appear quite feasible to caution the people against investing their money in them. A very wise movement. Did such obtain in this country it would have saved much money to investors as well as have placed the industry in a more favorable light. Knowing the peculiarities and the difficulties in handling it a word here may not be out of place to caution capital against investing in untried processes. This subject is quite as technical as mining, for instance, and in the same way the ordinary public require the expert advice of an experienced, unbiassed engineer. Let this be preliminary to the formation of a company for the manufacture of peat by new untried processes.

Companies in Nova Scotia and the West.

During the past summer tests were made of peat fuel on locomotives on a railway in Nova Scotia, and as a result it is proposed to establish a factory for the production of the fuel at Tusket, N.S. It is apparently to be a machine-peat.

In Manitoba, particularly at Winnipeg, a great interest has awakened in the possibility of securing this fuel to compete against hard coal which costs about $11.00 a ton. In December the Manitoba Peat Co., with a capitalization of $200,000, was formed to use the Dobson process and machines on the previously mentioned bog near Fort Frances, about 200 miles east of Winnipeg. Those who have subscribed to the Company are amongst the highest officials in the city and elsewhere, which is mentioned merely to indicate the faith these experienced men have in the undertaking. If the first plant of this Manitoba Peat Co. proves successful, two or three more will be erected in consecutive years on the same bog, which is almost inexhaustible, as it covers a good many square miles.



Machine Peat Drying on Racks.

In this same town another party has been advocating investment in a new process of his own. As a sample of the value of his process it may be mentioned that he boldly states that the time honored means of removing the moisture from peat by air drying is very detrimental to this article, because at the same time it eliminates many valuable constituents of the peat. This is nonsense. In the process the water is to be sieved out and the resultant product dried by steam, both of which last have been proved quite impracticable commercially.

Processes Used in United States and Great Britain.

In Illinois some parties during the past summer have been trying to produce fuel by a process which in Ontario is known as the Dickson. The press is of the open tube variety but drying was attempted in a centrifugal machine. As may be read elsewhere, drying by centrifugal means, squeezing or filtering has been proven impossible below 65 to 66% water at best, with further attempts along these lines. There is no getting aro the fact that air drying is a necessary part at least of the p cess of manufacture since practically every producing peat tory in the world is getting rid of the water in this way. Michigan the White press has been tried again. This mach also uses the open tube die, but the compressions therein of t peat are made by rapid, hammerlike blows of the punch, as opp to the slow motion of the punch where this die was origina employed. No information has been received as to the succe of the trials.

In England, Scotland and Ireland they are passing throu much the same preliminary stages of experimentation that v have already been through and like us they are religious relying on their own ingenuity from the start instead of makir use of what has been done in other lands, to profit by thos achievements and begin where they left off. They also hav their quota of new inventions of peat processes, amongst whic is one to make Electric-peat fuel. It is not certain how the elec tricity is going to be used, but the result is apparently a car bonized fuel or coal, which is then to be formed into briquette The use of electricity as a means of heating and drying is alto gether too costly to be practicable. One article speaking either this same process, or another in which electricity employed, gives the id that by passing a curre of electricity through peat, the cells or fibre o moss will be shattered the evaporation of the tained moisture rend more quick and comp Just why the electric rent, even if it would through such a poor ductor as peat, sh uld shatter the fibre, is far from apparent. In Scotland it is proposed to manufacture fuel from the bogs of excellent peat to be found in the island of Skye. A new process and machine are to be tried, the details of which have not yet been made public. The undertaking is, however, in the hands of an English gineer.

Machine-Peat.

To return to Ontario, which has always been the centre the peat industry in this country, a short detailed reference the operations of the two processes which give promise of s cess will be warranted.

One of these is the above-mentioned first attempt of adop ing the European practice of making machine-peat fuel. M V. Moore, of Peterborough, Ont., is engineering the work, during the last season installed a plant which turned out abo 25 tons of excellent fuel. Of course, a great deal of time was taken to do this, and the test was not, therefore, on a commercial scale. The accompanying photographs will give a fair idea of how the peat is made and dried.

The peat is dug by hand with spades, thrown into cars, then hauled on portable tracks to a large hopper, from which it drops between a pair of close-set rolls, one roll revolving twice as fast as the other, so that the fibre of the peat is almost completely destroyed, for the better elimination of the water and the formation of a dense product when dried. From there it passes through a machine much like an ordinary brick machine, where it

Labor Column

A MODEL AGREEMENT.

Basis of Negotiations Between the Canada Foundry Company and its Employees—The Company's Position Explained.

The relations existing between the Canada Foundry Company and its men have of late been aired very freely in the public press, but notwithstanding all that has been said, considerable misapprehension still prevails with regard to the real motives underlying the policy adopted by the company. Temporary reductions in the staff, following as they did immediately after the refusal of a year's contract at current wages by some of the men, were taken by union sympathizers to mean that the company had been endeavoring to coerce its employees into the signing of an agreement. Mr. Alex. Champion, Second Vice-President of the International Association of Machinists, voices the attitude of those who would seek to make trouble where none exists when he says: "Some of our men were approached regarding the signing of an agreement, which no freeborn Englishman would entertain for one moment, and on ascertaining the fact the company discharged 40 or 50 machinists."

As a matter of fact, the machinists referred to would have been discharged in any event. For some time prior to the taking of inventory a larger number of hands were employed than the company could reasonably expect to find work for throughout the year. These it was necessary to lay off. They were not offered a year's contract; it would have been injudicious for the company to enter into a year's agreement with every man on their pay roll, especially at a time when it was abnormally large. The offer was made only to a limited number. So long as the work lasted, employment would gladly have been furnished to others, but when operations slackened off the first to be let go would naturally be those to whom the company were under no obligations.

The following letter from the general manager of the company is an official statement of their position.

The Letter.

To the Editor, INDUSTRIAL CANADA:

Statements having appeared in the press as to our works at Davenport, which are incorrect and misleading, we now desire to state the facts.

As usual at this season of the year we have closed down in all departments for the taking of inventory and the making of repairs. The men not necessary to the taking of inventory or making of repairs have been given a holiday and are being notified, from time to time, when to report for duty.

This being the slack season with us it is necessary to reduce our staff, and we paid off such of our men as would not be needed after the holidays on Saturday last.

Recently we have been asked to figure on some large orders. Before quoting we obtained options on the material, and as we did not care to undertake this work without knowing where we stood as to our labor, offered our men a year's contract at the present rate of wages, although it is higher than is being paid elsewhere in Toronto. We have to take the risk of finding sufficient work to keep them employed, and are compelled to continue the present rates even though reductions in wages might take place in this section, but we prefer not to enter into large contracts at close prices when we have to run the risk of loss through labor troubles. In other words, when figuring closely it is just as necessary to know in advance the cost of labor as the cost of material.

Inasmuch as most of the machinists declined to make a year's agreement we declined to tender on this contract, and the work has gone to another city. There was no coercion. We were willing to take contracts to afford steady employment to our men if they would agree to join us in taking contracts under present conditions. As some, in fact the majority, preferred to do otherwise, as is their right, we preferred not to take onerous contracts without knowing our position in advance. The men were offered a year's steady employment, and if we now have to let some of them go, it is surely not the fault of the company, but we are still willing to make agreements with a certain number of good machinists and take our chances of providing steady employment for them.

Yours very truly,

Frederic Nicholls,

General Manager, The Canada Foundry Co., Ltd.

Toronto, Jan. 6th, 1905.

Mr. Champion characterizes the company's statement as contradictory; he says that in their letter they state "they are still open to make agreements with the machinists, and upon a proposition of this nature being made to them, the company refused to do so or entertain anything of the kind."

Mr. Nicholls' letter explicitly states that they are still willing to make agreements with a *certain number* of good machinists, not with *the* machinists. Inquiries made by INDUSTRIAL CANADA show that the proposition which the company rejected was of a nature entirely different from what Mr. Champion would have us believe. It was, in short, that the company should enter into an agreement with the union, instead of with individuals, as stated by Mr. Nicholls.

Through the courtesy of the company we are able to publish in its entirety the agreement which, according to Mr. Champion, no freeborn Englishman would entertain for a moment. That it was signed, and gladly signed, by some of the employees, is evidence of the fact that the men were not unanimous in regarding it as a species of slavery. In fact, a number of those who declined to sign the contract stated that they would have been glad to do so had the local committee of their union not forbidden them. To say that it is binding is to offer only favorable criticism, for it was intended to be binding, both upon the employee and the company. It has been prepared with a great deal of care by a prominent Toronto lawyer, and from the standpoint of either party appears to be all that could be desired. Those who have had the opportunity of examining it are loud in their praises of the fairness and completeness with which it deals with the points involved, and it will doubtless be read with great interest by employers of labor generally.

It is as follows:—

The Agreement.

UPON AND SUBJECT to the articles hereinafter set out, is now engaged by and agrees to serve Canada Foundry Company, Limited, as for the term of one year, beginning , 190 , at the company's shops, at or near Toronto, Ontario.

Article 1. The employee is to work fifty-five (55) hours per week, less all legal holidays, during the whole of the said term, the schedule of working hours to be fixed by the company.

Article 2. The employee is to serve the said company and no other employer during the whole of said term, and is to be skilful in his work and faithful to said company and obedient to the directions of his foreman and to the rules and regulations from time to time in force in the works.

Article 3. The said company is to pay the employee wages at the rate of cents for every hour so worked. The

...e to be paid every half month, except as to the part thereof referred to in the next article.

Article 4. On each pay day a sum equal to one-half cent per hour for each hour so worked by the employee shall be deducted from his wages and set apart and placed to the credit of the employee on the books of the company, and the company shall set apart on each pay day another sum equal to one-half cent per hour for each hour so worked by the said employee, and the two sums so set apart each pay day shall go to form a fund which shall be paid to the employee at the termination of the said term of employment, if the employee has performed and kept the agreements by him to be kept and performed.

Article 5. As it is absolutely impossible to estimate, compute, or ascertain with any degree of exactness the loss and damage which will ensue to the company and its business by reason of the failure of the employee faithfully to perform his undertakings herein, such loss and damage the parties hereto now fix at the sum of Forty Dollars ($40.00), and in case of such failure by the employee, he shall forthwith pay to the company the sum of Forty Dollars ($40.00) as liquidated damages, and not as a penalty, and the said damages are to be paid out of any wages that may have been earned by the employee prior to such failure or breach by him and out of the fund set apart and created in accordance with Article 4 herein, and the employee shall be liable to the employer for any part of said damages not paid in the manner stipulated. It is understood that the company has such financial responsibility as to make collectable any judgment against it for failure on its part of performance of its undertakings herein, and that the said fund is to be formed and the provisions relating thereto are made, because the employee may not have such financial responsibility as would render judgment against him collectable otherwise.

Article 6. The employer is not to be liable for wages during any time that the plant is shut down for repairs, taking of inventory or because of fire, accident or any other unforeseen cause.

Article 7. This agreement is made for the purpose of securing continuous service from the employee and the said employee agrees that he will not quit his employment with the company during the term above mentioned because of a grievance of any other person or persons, or in furtherance of any demand or complaint or objection of any other person or persons.

SEALED AND EXECUTED at Toronto this day of , 1904.

It would be impossible to discuss here the various objections that have been raised against the agreement. Exception is taken to it on the ground that it does not guarantee steady work. Upon that point, as upon every other, the agreement speaks for itself. The contract is plainly for one year, and Article 7 expressly stipulates that the agreement is made for the purpose of securing continuous service.

DOMINION COAL COMPANY AND THE P.W.A.

Features of the Agreement Under Which Their Mines Will be Operated for the Next Three Years.

The signing of the three years' contract between the Dominion Coal Company and its employees marks the closing of the most important drama enacted on the stage of Canadian labor during the past year.

Under this agreement, which has the sanction of the Provincial Workmen's Association, the employees are stipulated to exercise the greatest care to produce coal in the best possible marketable form, and to do their own shearing wherever and whenever thought necessary by the management. Rules are to be adopted providing for the imposition of penalties on men who are absent from their work without good cause or the permission of the management, or who leave their work before the full working time is completed. In case of a fatal accident, the section of ... in which the accident occurred may be idle for that day, but not on any subsequent day. Whenever practicable, miners will be given a sufficient number of places to ensure each one full and steady work every working day. The company will supply the necessary tools to miners. When it is considered necessary, open lights will be abolished and safety lamps given to the men. The rates for day labor shall remain as they exist to-day. The rent of houses to the employees of the company shall not be increased, nor shall the price of coal to employees be changed. The working conditions in the machine and car shops shall remain as they are, but an apprenticeship shall not exceed four years. An adjustment of the wages of all employees of such shops shall be made at periods of not less than six months during the period of this agreement.

Considerable discussion took place over the question of sympathetic strikes. Clause three of the agreement not only forbids such action on the part of the employees of the Dominion Coal Company, but permits the company to fill contracts for other companies in case the latter have strikes. Considerable pressure was brought to bear by lodges of the P. W. A. on the mainland to have this feature eliminated, and though strongly opposed by the council for a time it was finally assented to.

It is stated that similar propositions will shortly be submitted to the employees of other coal companies throughout Nova Scotia. They will differ, of course, in small matters of detail, but an effort will be made to preserve as uniform a rate of wages as possible.

Such an arrangement cannot but be a source of satisfaction to the coal companies and to the business community generally. A long term of uninterrupted operation will mean much to the workmen themselves, while at the same time it will enable the mine owners to enter the market boldly and to tender on important contracts hitherto beyond their reach. The market for Nova Scotia coal is at present almost entirely a local one, but a determined effort will now be made to solve the transportation problem, so that the upper Canadian markets can be invaded.

TEAMSTERS WANT MONOPOLY OF CIVIC EMPLOYMENT.

The strike of the St. John teamsters is worthy of note as being an organized attempt to establish a closed shop in one of the public works departments of that city.

Following a recent heavy fall of snow, which blocked the cars and impeded traffic, the Street Commissioner issued a general call for shovellers and teamsters. Work was freely given to those applying for it, and among others to one Howe, a teamster, who was not a member of the union. Objection was taken to his employment by the union teamsters, who requested his dismissal, and upon their petition being refused they went out on strike.

The progress of the strike was devoid of interesting features. The stand of the teamsters was generally regarded as untenable, and when it was suggested that Howe be placed on streets where it would not be necessary for the union teamsters to come in contact with him while passing to and from the dump, the proposal was readily agreed to on both sides and work was resumed.

This action of the union towards a citizen and ratepayer must be regarded as an attempt to establish, by means of precedent, class legislation of a most vicious sort. To accede to such demands would have been to violate the principle of freedom and equality upon which the whole of our social fabric rests. Had either of the political parties taken such a stand with regard to the employment of men of the opposite stripe, it would have created an uproar, but familiarity with such demands from labor unions results in our passing them by without any thought as to their true significance. The government of our cities is conducted for the benefit of all classes of citizens, not for the benefit of any one class, and no one has a right to say that a certain ratepayer shall be refused employment because he is or is not a member of any particular order.

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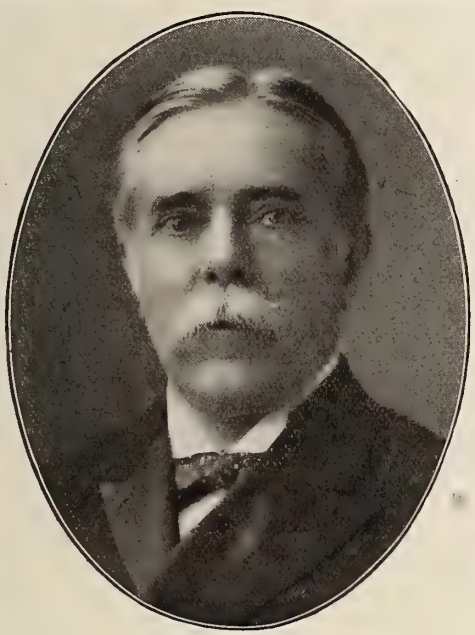
Among the Industries

THE MANUFACTURERS OF CANADA.

Phillip William Ellis, twin brother of M. C. Ellis, Ex-Vice-President of the Toronto Board of Trade and for three consecutive years President of the Commercial Travellers' Association, is the eldest son of the late W. H. Ellis, C. E., under whose direction the Canada Air Line, the Midland, the Toronto, Grey & Bruce, and other important lines of railway were built.

He was born in Toronto on Sept. 11th, 1856. His early education, like that of many other men of that time who have since risen to prominence, was received at a well known private school kept by Miss Reeves. He afterwards attended the Model School and the old Grammar School. Upon completing his education he served his apprenticeship as a practical jeweller, and in 1877 in company with his brother, formed the present firm of P. W. Ellis & Co.

Theirs was the first firm in Canada to introduce the factory system into the manufacture of gold and silver. Prior to this



No. 10. Mr. P. W. Ellis.

time jewellry was made up principally by small jobbers, and only to order, but P. W. Ellis & Co. originated their own designs, and from those designs manufactured stocks to supply the trade, an undertaking calling for a considerable amount of capital and no less courage. The remarkable progress which they have since made is equalled only by the enterprise which marked the beginning of their career. In the interests of Canadian jewellers, and at great expense to themselves, they fought the attempt made by a certain United States company to control the use of panel marks, and after a long legal contest, involving evidence from the Assay Office of England, their efforts were finally successful. It may here be remarked that the manufacturing jewellry industry of Canada, in the building up of which they were pioneers, has grown to be a most important one. To-day it represents an investment of hundreds of thousands of dollars in materials and costly power, automatic and other machinery; it furnishes employment to a large number of skilled and highly paid workmen; and for the general efficiency of its plants it stands second to that of no country in the world.

Mr. Ellis has been a member of the Canadian Manufacturers' Association for nearly twenty-five years, and during the greater part of this time has seen active service on its firing line, He was 2nd Vice-President in 1893, 1st Vice-President in 1894, and was nominated for the Presidency in 1895, an honor which he declined at the time, but which he afterwards accepted in 1900. It was during his year of office and largely as a result of the untiring energy with which he applied himself to the duties devolving upon him, that the Association made its greatest headway. The membership was increased from 340 to 825. A closer bond of union was established between the Toronto and Montreal offices. Plans were laid for the organization of the Association along broader and more practical lines, and an esprit de corps was created which won instant recognition for the Association among the leading commercial organizations of the Empire.

With nearly every important work undertaken by the Association during the past four years Mr. Ellis has been prominently identified. He was instrumental with others in establishing a commercial course at Toronto University and in bringing about the amalgamation of the School of Practical Science with that institution. As an arbitrator on labor disputes he has acted on different occasions with marked success. In 1903 he represented the Association at the Congress of Chambers of Commerce of the Empire in Montreal, where he evoked the utmost enthusiasm by his eloquent and stirring presentation of the views of Canadian manufacturers on the tariff question. In his capacity as Chairman of the Parliamentary Committee for two years he exercised a careful watch over both Provincial and Dominion legislation and in a great many other ways he has earned for himself the warmest thanks of his fellow members by his faithful devotion to their interests.

In the politics of his country Mr. Ellis has always taken an intelligent interest. Though an ardent supporter of the Conservative party he is by no means bigoted, and his public utterances have been characterized by a fairness and manliness which have won for him the esteem of both sides alike. He has repeatedly been offered the Conservative nomination for one or other of the Toronto constituencies, an honor which he has steadily declined to accept.

He has always been an earnest student of commercial and industrial questions, and has visited all parts of the Dominion for the express purpose of informing himself regarding the products of his country and the diversified life of its people. He has also visited the principal centres of the United States, and has travelled through Great Britain, France, Germany and other countries, examining closely into the different phases of the industrial problem. His wide experience and his keen insight have combined to make him one of the best informed men in Canada along these lines, a fact which received public recognition when he was appointed a member of the Ontario Power Commission, of which he is Vice-President and Treasurer.

Mr. Wm. Stone, President of The Toronto Lithographing Co., Ltd., has been appointed to the vacancy on the board of directors of the Bank of Toronto, caused by the death of Mr. Henry Cawthra,

The Valley Woollen Mills at Southampton, N.S., have been taken over by a new company, who will enlarge the buildings

and change the power system from water to steam. O. B. Schurman and A. S. Filmore are among the incorporators.

The North American Seal Leather and Oil Company, Ltd., will engage in the manufacture of leather from Newfoundland seals by a new process. They are capitalized at $150,000 and their head office is in Halifax.

An important consolidation of saw manufacturing interests has been effected by The Canada Saw Company, Limited, who have acquired the works of The James Robertson Co., Ltd., at Montreal, Toronto and St. John, and of the Ottawa Saw Co., Ltd., at Ottawa. The four plants will continue to be operated as at present, but they will be under one central management with head offices in Ottawa. Mr. Charles Magee of Ottawa is President, and Mr. P. M. Feeney of the same place Managing Director.

A new company has been formed in Montreal for the manufacture of shade cloth and window shades, under the name of Smith, Carter & Smith, Limited. The plant has been fitted entirely with new machinery and frames, and is now turning out a large quantity of goods.

Another electric crane will be installed in the coal washing plant of the Dominion Iron & Steel Company at Sydney. It will be used to transfer the coal from the pits in the washing plant to the belt conveyors, which carry it to the coke ovens bins.

The new Toronto Pressed Steel Company will probably locate at Toronto Junction. They are capitalized at $100,000, and will manufacture railway supplies.

New Westminster is rejoicing in the prospect of an industrial boom. The old Ross-McLaren mills, idle for fifteen years, have been bought by the Fraser River Sawmills Company, who will engage extensively in the export lumber trade. Another large sawmill will be erected on the Fraser River by the Small & Bucklin Company. This same company have prepared plans for a tannery of large capacity, which it is expected, so far as size and efficiency are concerned, will be able to compete with the foremost tanneries of the Dominion.

Esquimalt, on Vancouver Island, has been selected as the site for two large canneries, one for C. F. Todd & Sons, and one for the Capital City Packing Company. Different forms of fishing will be engaged in, so as to keep the plants running the year round.

Mr. James Munro, of the Munro Wire Works, Limited, New Glasgow, states that his firm has secured a large building site in Winnipeg, where they will at once proceed to establish a branch factory.

Work has been completed on the new plant of J. M. Ross, Sons & Company, St. Catharines, who will manufacture traction engines and threshing machines. The main building is 300 x 60 feet, one story high, and contains the moulding room, machine shop, forge shop and boiler room. The wood-working department is a separate two-story structure, 100 x 60 feet. The entire building is of brick, with frame ends to allow for expansion.

Port Hammond, B.C., is to have a creamery and canning factory. Local capital only is represented in the undertaking, which will be known as the Maple Ridge Creamery and Fruit Canning Company, Limited. An outfit of machinery has been purchased from Messrs. C. Richardson & Company, St. Mary's, Ontario.

D. B. Martin & Company, of Philadelphia, have purchased the Eastern Abattoir on Frontenac Street, Montreal, and will spend $150,000 in remodelling it so as to make it one of the most efficient in the country. They have also leased the Eastern Cattle Market from the C. P. R., and will take steps to put it in first-class condition.

Almost the entire plant of the Canada Carriage Company, Brockville, was reduced to ashes early in January, involving a loss of about $300,000. Some 300 men were thrown out of employment. The factory was a substantial five story brick building, and one of Brockville's industrial mainstays. It is understood that plans are under way for rebuilding in the spring.

All the electric interests in Ottawa, including the Ahearn and Soper, Booth, Hull Electric, Ottawa Electric, and Consumers Companies, are said to be negotiating with a view to forming one immense concern. The capital spoken of is $10,000,000.

Sir Adolphe Caron, Mr. E. B. Eddy, and other have secured a charter under the name of The Temiscamingue and Mechiskan Dam Company, Limited, for the purpose of developing electrical energy at the southern outlet of Lake Temiscamingue. Their chief place of business will be Ottawa.

The organization of the New Brunswick Iron Company has been completed, and Messrs. C. V. Wetmore and John S. McLennan, both of Sydney, have been elected President and Vice-President respectively The property of the company is situated at Lepreaux, Charlottle County. The ore is a magnetite, and is said to be almost unlimited in quantity. The Sydney works, it is expected, will buy very largely of it, while shipments will also be made to the United States, England and Germany. None of the $1,000,000 stock is being offered for sale.

Reports current some months ago to the effect that the McClary Manufacturing Company intended closing its Hamilton branch are now denied. The manufacture of furnaces will still be continued at Hamilton, and the warehouse will be enlarged so that a complete line of tinware, enamelware and stoves may be carried in it. Mr. Alexander Clark, formerly of London, is manager.

The plant of the Cramp Steel Company, at Collingwood, has been taken over by a new corporation, known as the Northern Iron and Steel Company. It consists of open hearth steel converting furnaces, together with large rolling mills to roll the product into such shapes and materials as the market demands. The furnaces are of the stationary type, and are of twenty ton capacity each. They are installed in a structural steel building 100 x 120 feet.

Good progress is being made with the erection of the works of the Canada Car Company at Montreal. The main building, with the car shop proper, will be 1,000 feet long by 280 feet wide. All the shops will be of a uniform height of 32 feet, with walls of concrete. Electric overhead cranes will be installed in most of the shops, which it is expected will be ready for the machinery by May 1st. A contract has been given to the Canadian General Electric Company for the turbine power plant which is to operate the various departments. The entire works will entail an expenditure of nearly $1,000,000.

The new automobile works of the Packard Electric Company at St. Catharines are now in full running order. They have been built in four sections, comprising a machine shop, an assembly room, a trimming and paint shop and a blacksmith shop. They are operated by electric power, and are supplied with the blower heating system. The style of motor to be manufactured is a 12 horse-power touring car, capable of carrying four passengers.

The town of Virden, Man., is to have a meat packing establishment. It will be known as The Virden Meat Company, and will be financed entirely by local men, of whom Ex-Mayor Duncan Macdonald is the principal mover.

The Canadian Northern are making active preparations to rush the laying of steel to Edmonton early next summer. Messrs. Huff & Carter of that city have been awarded a contract for supplying 100,000 ties, to be delivered at Battleford before July 1st next. About 100 men and 25 teams will be needed on the job.

Building operations in Winnipeg during the past year have been far in excess of all previous years. Permits were issued to the number of 1,737 for 2,244 new buildings, of a total declared value of $9,173,150, as against $5,689,400 for 1903. In Montreal new buildings that went up during 1904 were valued at $3,643,181.

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Foreign Trade News

The Liege Exhibition.

An International Exhibition of Arts and Manufactures, which promises to be of more than usual importance, will be held at Liége, Belgium, from May to October of the present year.

The city of Liége has a population of about 200,000 French-speaking people. It is situated in the midst of a great coal mining district, and is an important railway centre. It is celebrated for its iron and steel manufactories, and for the number and extent of the various industries connected therewith, especially the cannon foundries and fire arm factories. In the Cockerill Iron Works alone it is said that 10,000 hands are employed.

The Exhibition will be under the patronage of the Belgium Government, and arrangements have been made for admitting free of duty all foreign goods intended for display. If unsold, they will be carried back to the seaboard free of charge. Exhibits will be classed into twenty-one groups, comprising mechanical plant and processes, electricity, civil engineering, mining and metallurgy, agriculture, etc. The British Vice-Consul reports that there will be a very large representation of the engineering and metallurgical trades, 29,000 square yards being devoted to machinery alone.

Canada will be represented by a display under the charge of Mr. Wm. Hutchinson, the Dominion Exhibition Commissioner. It will occupy a pavilion by itself. Like the display at St. Louis, it will be arranged mainly with a view to attracting immigration, and will consist mostly of natural products, though a small amount of space will be reserved for manufactures. It is understood that the Province of Quebec will have a separate exhibit of its own.

Members of the Canadian Manufacturers' Association desiring to exhibit are requested to communicate at once with the Secretary, Board of Trade Building, Toronto.

Monetary Reform in Mexico.

In November last the Mexican Minister of Finance introduced into the Congress of that country a bill having for its object the placing of Mexican currency on a gold basis. Heretofore, in the interests of the silver miners, the coinage of silver has been unlimited. It is now proposed to restrict the amount of silver coinage to what may be deemed necessary for actual circulation, and to fix the dollar, or peso, as the unit of exchange with a legalized value of 50 cents gold. By this arrangement silver will be raised from its bullion value to a something slightly more than its intrinsic worth.

U. S. Consul Parsons, writing on the subject from Mexico City, states that the universal opinion appears to be that the change will be of inestimable advantage to the country, but there is a great difference of opinion as to when it will go into effect. A leading local banker tells him that there are in circulation about four billion dollars (Mexican), of which only about one hundred million are now in the Republic. The bill provides that this enormous amount in other countries shall be denied return to the Republic, and for this reason some of the bankers believe that the bill will be passed at once, in order to prohibit its being shipped in by speculators counting on its ultimate rise in value. While all the bankers concede this to be a strong point, some of them think that only that part of the bill relating to this particular phase of the subject will be enforced immediately, and that the other parts may not be acted upon for some time. On this point the Minister of Finance writes as follows: "If the appreciation of the dollar over the silver which it contains is to be the fruit of the efforts and sacrifices of the Mexican nation, it would be by no means just that the profit involved in this operation should be enjoyed by persons in foreign countries who have accepted the dollar merely for its intrinsic value, without ever entertaining the remotest intention of utilizing it as currency in dealing with Mexico. Thus no one will be injured by the prohibition to reimport Mexican dollars, but in order that the country may not become liable to even a shadow of reproach in this respect a period of time may be allowed in which persons desiring to reimport dollars may do so."

Depression in the German Rubber Industry.

Notwithstanding a steady increase in the consumption of rubber goods in Germany, the rubber manufacturing industry of that country is suffering from a severe depression. This is ascribed to (1) the remarkable advance of crude rubber, (2) over-production, due to the excessive increase in the number and capacity of rubber factories since 1899, and (3) the action of the electrical manufacturing companies, who were previously large consumers of rubber fixtures, in establishing special departments for making their own supplies.

The Germans assert that the enhanced cost (from 57 cents in 1902 to $1.19 in 1904) is not due to a diminishing supply for, thanks to more intelligent methods of tapping and gathering the gum, as well as to improved means of transportation from remote Brazilian forests and the planting of rubber trees in various countries, the production of crude gum is now slowly increasing. They charge that the high cost of crude caoutchouc is due almost wholly to manipulation, especially in England, where a few powerful firms are able to control the supply and fix prices for the whole of Europe.

It is true that the enormously increased use of pneumatic tires for motor vehicles, and of solid-rubber tires for carriages, cabs, etc., has made a heavy draft on the crude-rubber supply; but, on the other hand, there is now but a limited though steady demand for bicycle tires, which five or six years ago were made by hundreds of thousands, so that the deficit in that specialty, in some measure at least, balances the increased consumption of rubber for motor vehicles.

The fatal fact which underlies more or less the whole situation in Germany is that, on account of the excessive number of factories and consequent overproduction, it is impossible for manufacturers to force up the selling prices of their goods in keeping with the double cost of raw material. Attempts have been made to control the situation through the formation of a trust, but owing to apparently irreconcilable differences these attempts have utterly failed. In Austria, on the other hand, where only eight rubber factories exist, a syndicate was readily formed which advanced prices to fit the increased cost of materials, and thereby gave the independent German manufacturers a chance, which they promptly improved, to undersell the Austrian makers in their own market.

Brazilian Hardwoods.

Under date of December 1, 1904, United States Consul-General Eugene Seeger, of Rio de Janeiro, reports as follows from Chicago:—

"During recent travels in the United States I have observed that the prices of the finer grades of hardwood have increased to such an extent as to cause an impediment to the trade. I therefore call the attention of those interested in the wood industries to the fact that fine varieties of cabinet woods are very abundant on some of the navigable rivers in the southern part of Brazil and also in the State of Espirito Santo. Freights

between the United States and Brazil in sailing vessels are very cheap at present, and it is easy to secure concessions from the State governments for large tracts of timber land; consequently the export of the finer grades of cabinet wood from Brazil to the United States promises to be a lucrative business. I would advise those interested in the wood industries to make investigations promptly before European competitors have secured the most desirable properties and privileges. I would be very glad to assist any efforts made in this direction."

Travellers' Taxes.

Mexico.—By a recent amendment to the law taxing traveling salesmen in the State of Tabasco, Mexico, all representatives of foreign business houses will have to pay a license fee of $10, and those of local business men, $5. The license must be obtained before any business can be done, in default of which a fine of $2 will be imposed for every day until such license is secured. All buyers of goods from unlicensed salesmen are subject to the same fine.—*U. S. Consul, Veracruz.*

The World's Production of Gold.

The following figures, showing the world's output of gold in 1903 by countries, are furnished by the Canadian Commercial Agent at Melbourne, Australia, who takes advantage of the occasion to express the hope that they may furnish food for reflection to Canadians who are interested in developing an export business in Australia, especially in the matter of supplies to gold miners:

	Gold.		Gold.
Australasia	£18,288,070	China	1,501,560
United States	15,086,300	Corea	615,000
Africa	13,939,610	Colombia	558,500
Russia	5,049,000	All other	3,207,360
Canada	3,955,250		
India	2,324,930		
Mexico	2,188,890	Total	£66,732,470

Bicycles.

China.—The Chinese are beginning to buy a great many bicycles and accessories. Shanghai, like most towns on the Chinese coast, is built on a level. The roads are macadamized, and are very fair for riding on. The aim of most of the "boys" or servants is to possess a machine, and this has created a demand for cheap bicycles. A good many Belgian machines were at one time introduced, but they were found to be hardly strong enough for the hard work they are put to here. Their price also was against them. Bicycles sent to China should be of the very best and strongest quality, otherwise the boom for this form of locomotion will collapse.—*Belgian Consul-General at Shanghai.*

Electric Supplies.

China.—Several of the larger mission schools in Hangchau and vicinity are considering the equipment of their schools with small electric light and power plants in connection with gasoline-engine power. They are doing this both for the sake of the light and for the means such plants would afford for instruction. Fifty-light or sixty-light plants will probably be about the size needed. The equipment of one or two schools with such plants will lead to the equipment of others, as a matter of course, but the chief importance of the matter is in the fact that these small plants will be object lessons for Chinese business men and officials of what can easily be done in the cities in commercial light plants. Several American electric-light people are considering schemes for the establishment of light plants in cities of this province, but so far, among other hindrances, they have lacked the cordial co-operation of Chinese business men. With a few object lessons at hand this backwardness may be overcome. The development of trade in electrical supplies and machinery in this part of China will probably be very rapid when once it is well started, and the field certainly merits the attention of American business men.—*U.S. Consul, Hangchau.*

Salted Salmon.

Japan.—Regarding the probable prospects of the export of Canadian salmon into Japan, it may be remarked that there is a good future for the trade if the Canadian produce can successfully compete with Japanese and Russian salmon in point of prices. The Japanese use salted salmon extensively; and judging from the general increase of import despite the yearly increase of the domestic output, the consumption is gradually increasing. The Japanese, as a rule, take salted salmon, the use of canned salmon in ordinary times being very limited amongst them. They do not show a particular fondness for the Canadian salted salmon, for its flavor is not to their taste. The Canadian article mostly finds its way into the interior as the food of the operatives of spinning and other factories, and of miners, on account of its comparative cheapness. At present the Canadian export of salted salmon is chiefly in the hands of Japanese fishermen in Canada, who know how to salt fish to suit the Japanese palate.

The duty on salted salmon is 47½ cents per picul (= 133 lbs.), but a measure is now before the Parliament to increase it, and six or seven months hence it will likely be 71 cents per 133 lbs.

The following merchants deal in salted salmon largely:—Hamaguchi Shoten, Kita Shimbori, Tokyo, and Watanabe Jiemon, Aomonocho, Nihombashi-ku, Tokyo.—*Canadian Commercial Agent, Yokahama.*

Sanitary Fittings.

Argentina.—The National Government has decided to equip the houses of San Juan with modern sanitary fittings (cloacas domiciliarias), and for this purpose a sum of $600,000 has been granted. The work is to be completed within three years, and is under the supervision of the Direcciòn General de Obras de Salubridad de la Nacion in Buenos Aires, to whom all inquiries should be sent.—*U. S. Consul, Munich, Germany.*

Flour Trade of Brazil.

The preference of the 40 per cent. accorded by the Brazilian Government to United States flour in April last, seems to have had a very different result from what was anticipated. Instead of securing the market to United States millers, it has really worked to the immense advantage of British millers who have established factories on the spot, and who, in the words of U.S. Consul Chamberlain, "look with equanimity on 20 per cent. profits on money invested." In the first place the local millers have an advantage over Argentine flour of 35 cents on every barrel in the matter of duty alone. United States flour, while enjoying a preference, is handicapped to the extent of 50 cents a barrel, the difference in freight rates between Baltimore and Rio and Buenos Ayres and Rio. During the first six months of 1904 there was a total decrease in imports of flour to Brazil of 95,157 barrels, of which decrease the share of the United States was 86,600 barrels.

Condensed Milk.

Philippine Islands.—There is in these islands an excellent trade to be done in condensed milk, all the best brands selling very freely. The imports during 1903 reached $230,472, the greater part coming from the United Kingdom and from the United States. The French brands are beginning to enter the market.—*Belgian Vice-Consul at Manila.*

Pumps.

Mexico.—The development of the mining industry in this market has created a demand for centrifugal pumps of a much higher pressure than those up to now employed, of a larger capacity than usual, and able to raise water from a depth of 200 or 300 yards. The first of these pumps introduced came from Switzerland, but the Swiss makers sold their patents to the United States manufacturers, who now supply all the larger pumps used in the leading mines here.—*French Consular Report.*

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

227 **Agencies—Aix-la-Chapelle, Germany**—A commission agent who represents some of the largest manufacturers in Germany and Austria and enjoys an A1 reputation, desires to take up agencies of Canadian firms. He mentions particularly provisions.

228 **Amsterdam, Holland**—An active man with good connection desires to procure the agency of a leather exporter.

229 **Buenos Ayres, Argentine Republic**—A company acting in the capacity of agents and commission merchants, who send good references, offer their services as manufacturers' agents for Argentine and Uruguay. Up to the present time they have represented only European manufacturers and desire to make Canadian connections.

230 **Leeds, England**—A young man who has made a careful study of commercial possibilities in the above country offers his services as a representative of Canadian manufacturers to introduce their goods in Belgium and to furnish reliable trade information when desired.

231 **London, England**—(a) The names of Canadian firms seeking an outlet for their goods in Great Britain are asked for by a correspondent in a position to take agencies.

232 (b) A firm of importers and manufacturers' agents in London are desirous of hearing from Canadian manufacturers requiring representation, and having novelties suitable for the English market.

233 **Norway, Sweden and Denmark**—A correspondent who is a general importing agent of American goods in Norway, Sweden and Denmark, and who sends good references, desires to communicate with Canadian firms.

234 **Rotterdam, Holland**—A correspondent in Rotterdam who has carried on the business of commission agent and was at one time representing an electrical equipment company in Chicago, well known to the trade, and of good reputation, desires to represent a reliable shipper of provisions.

235 **Barrels (oak), Staves, Tops and Bottoms, Cornice Poles, Rings and Ends, Spring Blind Rollers, Wash Boards**—A correspondent in **Manchester, England,** desires to communicate with Canadian manufacturers in a position to fill orders in the above lines of goods.

236 **Barrels and Staves**—A **New York** export house entering particularly the South American republics, desires to communicate with shippers of the above.

237 **Boards (pulp)**—Application is made by an English firm for makers in Canada of wood pulp boards, in white, tinted and leather colors, such as are used for paper boxes, bookbinding and printing purposes; size 22 x 32 inches, from forty to six hundred sheets to the hundred-weight (112 lbs.).

238 **Boards (spliced)**—A **Manchester, England,** enquiry has been received for 3 or 5 ply boards, ⅝-inch thickness, such as are required for the manufacture of trouser presses.

239 **Bookcases**—A **Newfoundland** correspondent asks for names of Canadian manufacturers of bookcases.

240 **Boots and Shoes**—A correspondent in **Halifax, N.S.,** who regularly covers the West Indies Islands, and already represents Canadian firms in that field, desires to represent a manufacturer of canvas and tan boots and shoes.

241 **Bottles (syphon)**—An English firm of syphon bottle makers for mineral and aerated waters, who are manufacturing a new patent earthenware syphon, wish to interest Canadian users of such goods in the invention.

242 **Canned Goods**—An English firm largely interested in the canned goods business desires to undertake the representation of some good Canadian packers not already having agencies in the United Kingdom.

243 **Cheese and Butter**—A **London, England,** firm interested in the colonial export trade, desire to communicate with Canadian manufacturers and shippers of cheese and butter, canned or potted, and in tins.

244 **Dowels**—Inquiry is made by an English firm for the names of Canadian exporters of dowels (⅜-inch to one inch) chair and table legs turned from maple or birch, cornice poles, oak barrel staves and tops, and copper ore.

245 **Electrical Apparatus, Fixtures, Light, Supplies, Rubber**—A **London, England,** firm desires particulars and catalogues of the above lines of goods and states that business is likely to result.

246 **Flour, Corn Meal, Oats, Etc.**—A reliable firm in **Montego Bay, Jamaica,** desires to make Canadian connections in the above and other lines.

247 **Flour, Fish, Tinned Meats, Condensed Milk, Butter, Cheese, Hams, Washing Blue, Soaps, Sweet Biscuits, Shirts and Collars**—A commission agent established in the wholesale business in 1891 in **Kingston, Jamaica,** desires to handle the above lines on a commission basis, terms of payment to be arranged. Several responsible references are forwarded.

248 **Foods and Drugs**—A firm in **Croydon, England,** which employs a staff of travellers for the purpose of introducing specialties in food and drug lines, proprietary articles and similar goods, to the trade, wishes to act for Canadian manufacturers of those lines and also of manufactured specialties. wishes to appoint a Canadian agent.

249 **Fruits (green and evaporated)**—A wholesale merchant established in **Redon, France,** since 1846, desires to procure a general line of green and evaporated fruits, but particularly mentions apples. References are forwarded.

250 **Fruit, Fish and Vegetables**—A **London, England,** firm of agents and brokers would be pleased to hear from Canadian canners of fruit, fish and vegetables who may wish to develop export trade.

251 **Handles**—A large importer of handles of various kinds in **Camborne, Cornwall,** desires to get prices from Canadian manufacturers.

252 **Hardware, Enamelled Goods, Woodenware, Boots and Shoes**—A manufacturers' agent wishes to hear from Canadian manufacturers in the above and other lines requiring representation in **Great Britain.** He also desires to appoint agents in Canada for the sale of boot protectors and lasts.

253 **Leather**—A firm of leather merchants in **London, England,** asks to be placed in communication with Canadian tanners of sole, upper and other leathers, seeking an export outlet.

254 **Plate (steel and tin)**—A large firm of steel and tin plate manufacturers in **South Wales,** already doing a large trade through merchants, but who desire to do business direct, wishes to appoint a Canadian agent.

255 **Plugs or Shives**—Inquiry is again made from **England** for names and addresses of actual manufacturers in Canada of wooden plugs or shives, by parties able to import them in considerable quantities.

256 **Pulp (wood)**—Enquiry has been received from **Mexico** for the names of manufacturers of wood pulp.

257 **Rollers (maple)**—Inquiry is made from **England** for the names of parties in Canada in a position to supply large quantities of maple rollers for use in wall paper printing. The wood must be seasoned, with a two-inch bore and painted ends.

258 **Silex**—A leading metal and mineral merchant in **London, England,** is open to purchase supplies of "silex," and would be pleased to hear from Canadian producers of the material.

259 **Sticks (lacrosse)**—A **London, England,** enquiry has been received for lacrosse sticks. These are wanted both strung and unstrung.

RECIPROCITY A DREAM OF THE PAST

(*Continued from page 428*).

for the duties of citizenship and the occupations of life. Minerals in abundance; 100,000 square miles of coal yet untouched, in addition to our present areas which are being operated. Gold in almost every province, our production last year being second among the nations to that of your country and Australia. Nickel, admittedly the richest deposits that are known. Timber, majestic forests that yielded in 1903 a harvest of $80,000,000. In pulp now alone our statisticians estimate that we have sufficient to make 4,500,000,000 tons of pulp, which, at the present rate of consumption of the United States and Great Britain could supply them for half a thousand years. We are now sending you 1,000,000 cords per year, but we are strongly inclined to adopt such a policy as shall manufacture this at home by the labor of our own people. Agricultural lands! There lies an empire in itself—265,000,000 acres yet to be ploughed, each acre rich with the accumulated fertility of the centuries. Fisheries of coast and river and lake that yielded last year over $35,000,000 of a treasure, and that offered the very best training and recruiting ground of the navy. Almost countless water powers that are being harnessed as the servants and handmaidens of an industry. Nineteen thousand miles of railway, with probably eleven thousand miles more to follow within the coming decade. Six millions of people, hardy, intelligent, God-fearing. A climate that produces strong muscle and healthy brains, and that makes the home life, the main foundation of any nation, vigorous, strong and pure.

These, Sir, are our possessions! These are the possessions that lie at the bottom of our determination to build a nation. These, Sir, together with a history of creditable progress, are our reasons for looking upon Canada as a young giant scarcely conscious of his own strength, rising to enter the Olympian game of the nations, a game into which we are bound he shall enter with his hands unmanacled, with his feet untied by entangling alliances for the struggle and the race. These are the things which have fired us with the spirit of a song which once rang through your land in a trying time:

"For the birthright yet unsold!
For the history yet untold!
For the future yet unfurled,
Put it through!"

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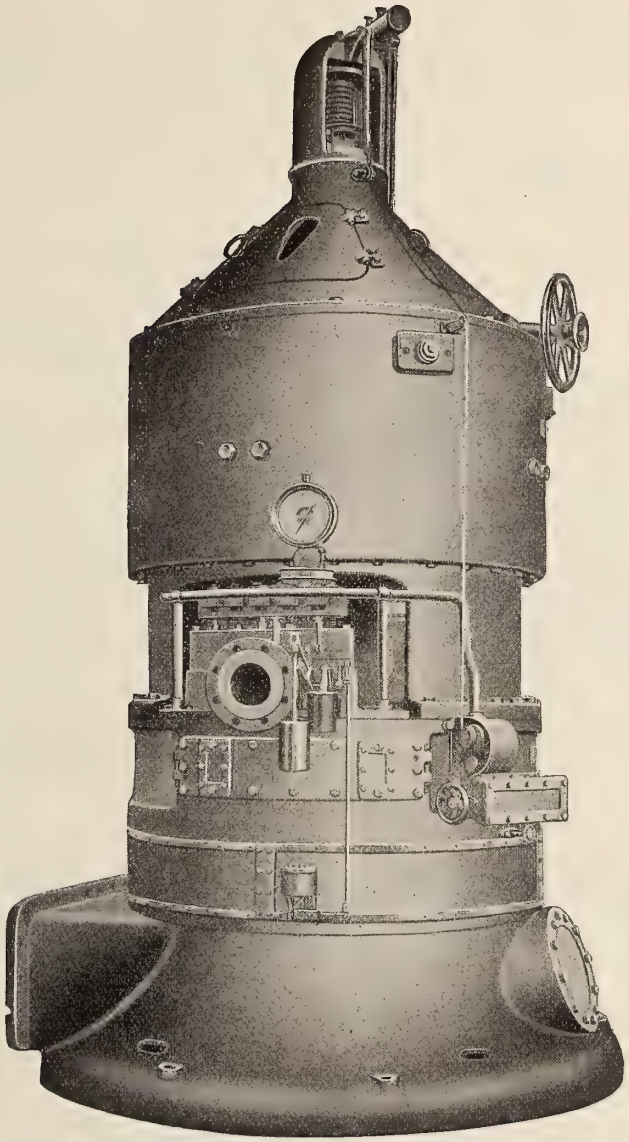
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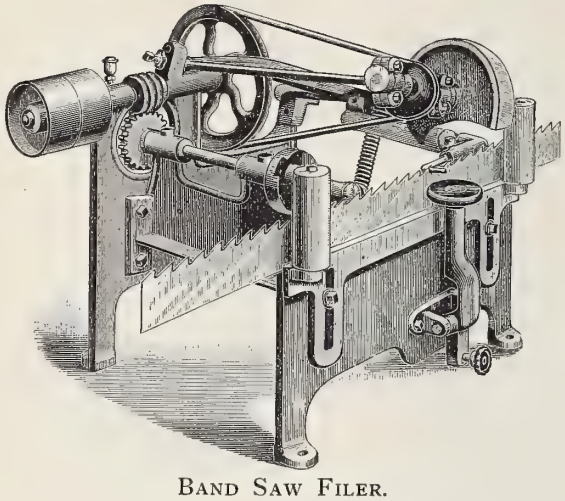
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AUTOMATIC **MADE IN THREE SIZES**

This machine is simple in design and easily operated.

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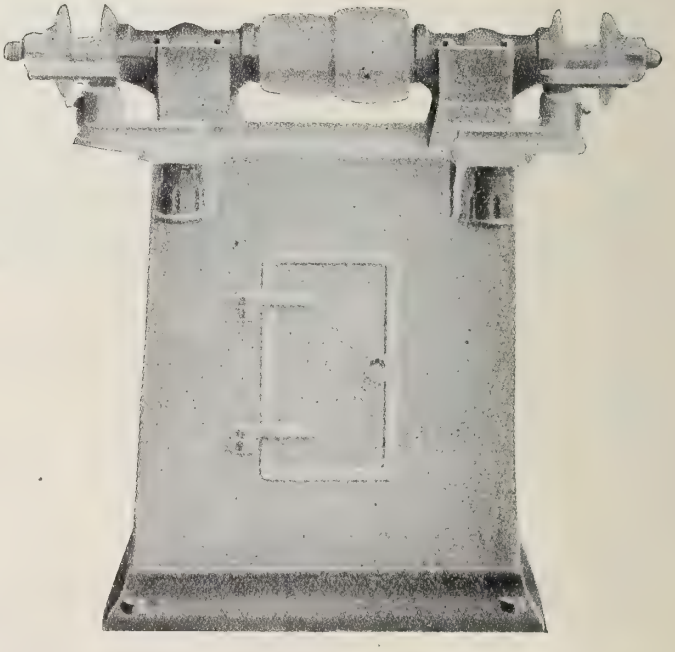
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To carry 2 wheels 12 to 16 in. diameter, 3 in. thick.

Length of crucible steel arbor -	42 inches
Distance between wheels -	30 "
Diameter of arbor between collars -	$1\frac{1}{2}$ "
Size of bearings - - -	8 x 1 9/16 "
Size of cone pulley on arbor -	5 and 6 x $4\frac{1}{2}$ "
Diameter of collars - - -	6 "
Height from floor to centre of arbor -	35 "
Size of base - - - -	23 x 27 "

Countershaft has cone pulleys 15 x 16 x $4\frac{1}{2}$ inches face.

Tight and loose pulley, 8 in. diameter, 5 in. face, and should run about 650 revs. per minute.



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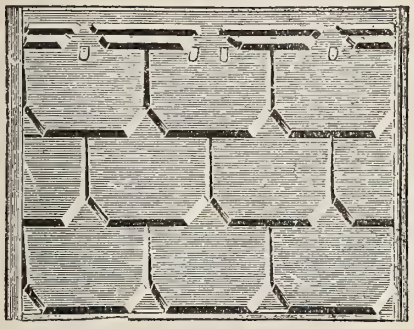
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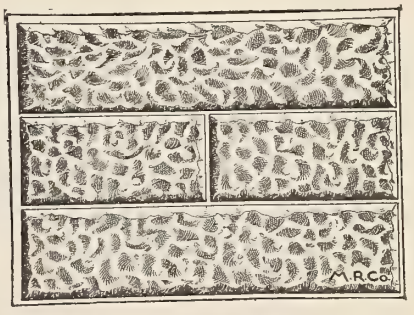
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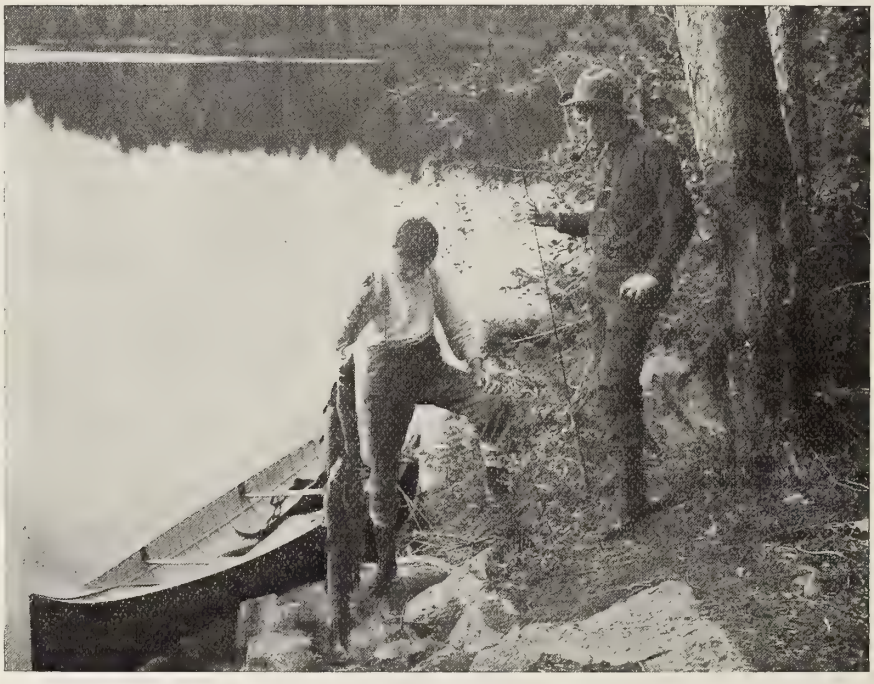
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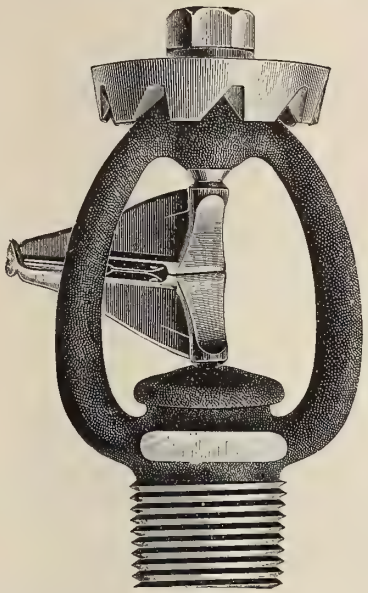
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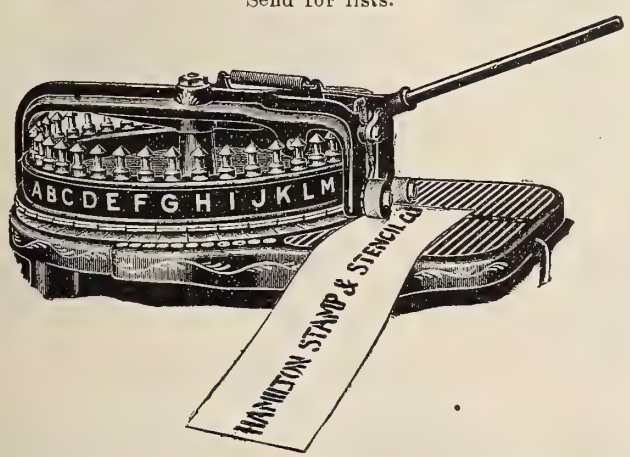

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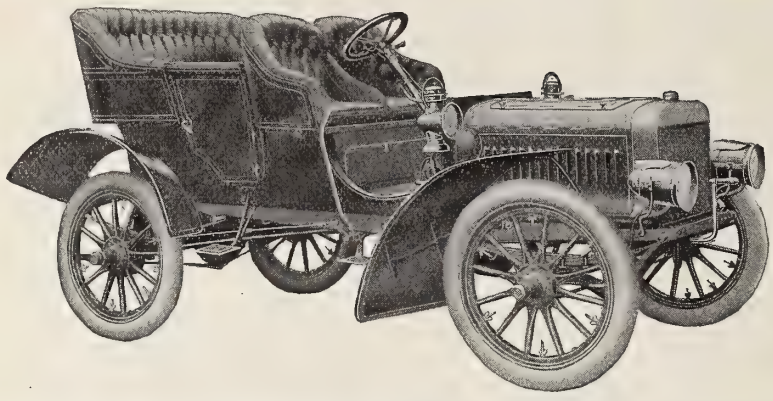
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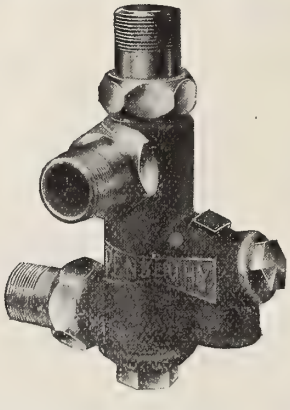
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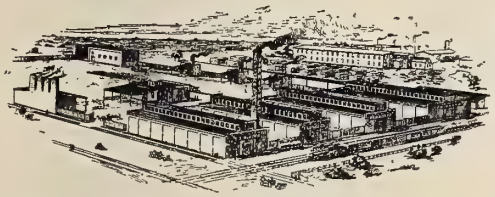
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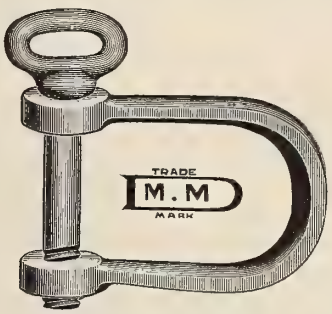
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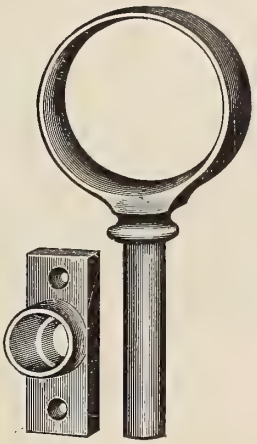
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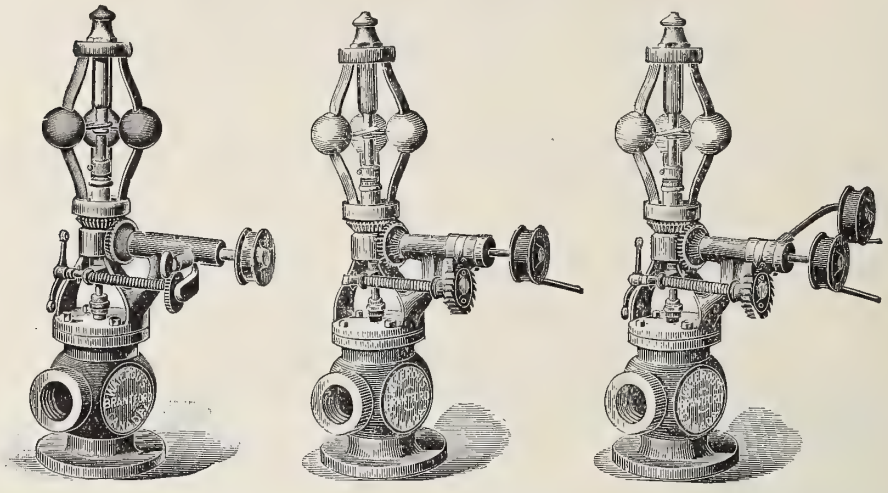
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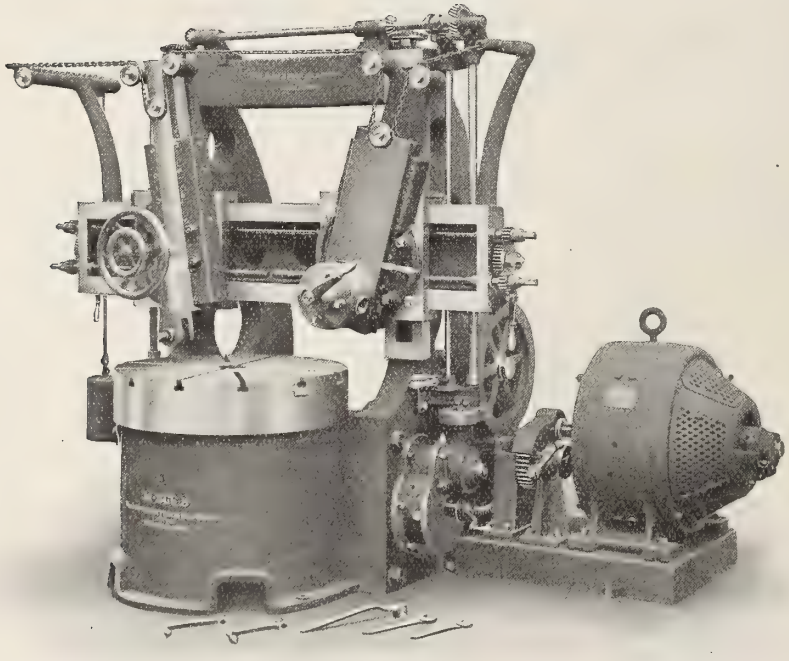
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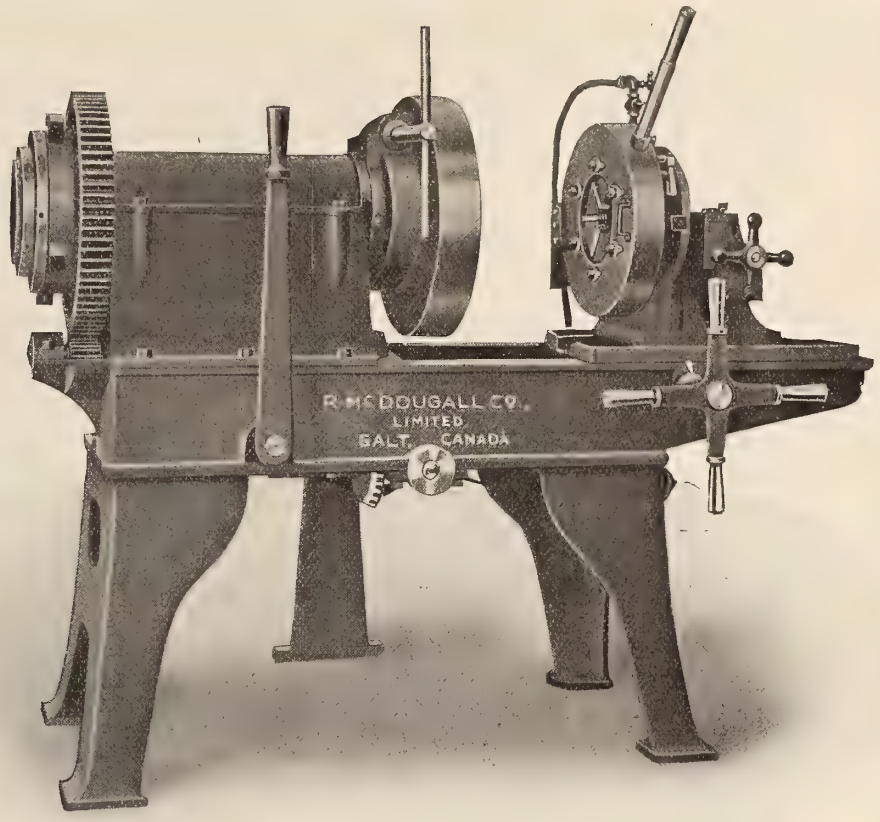
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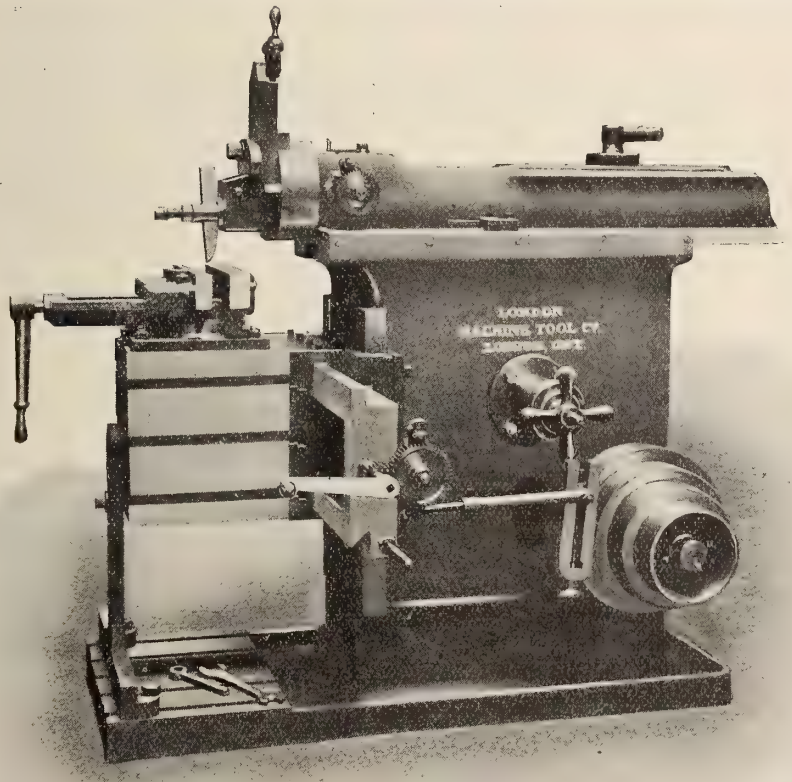
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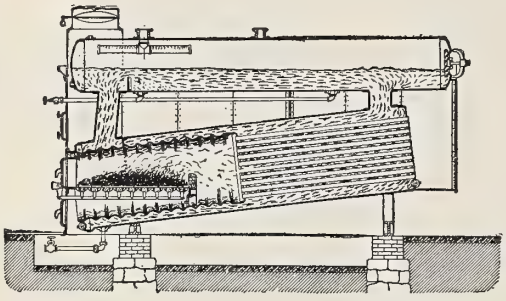
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AS PROVEN BY THE FOLLOWING:

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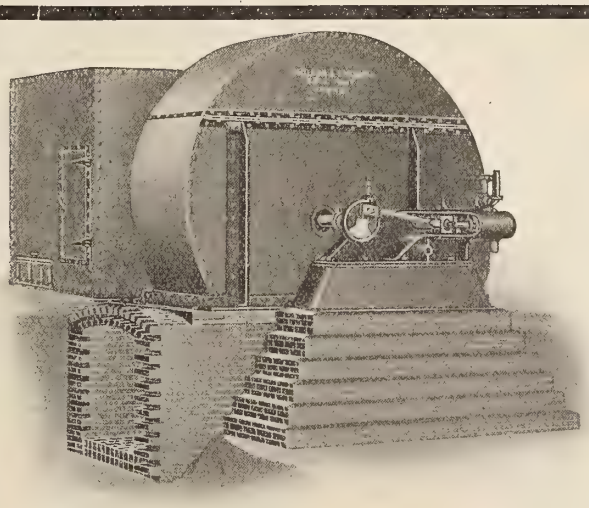
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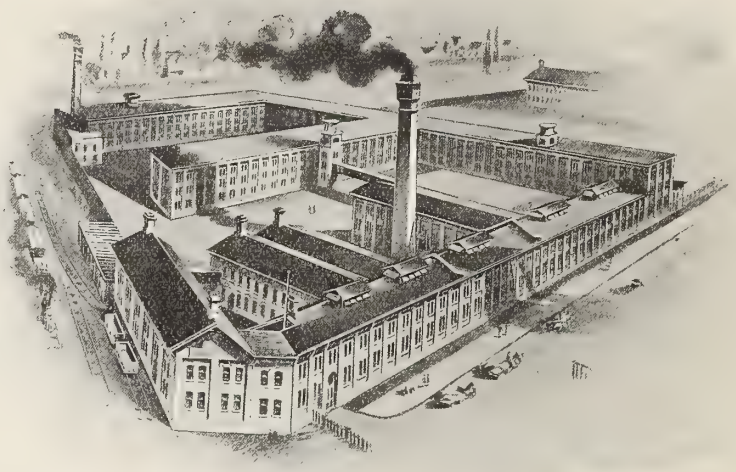
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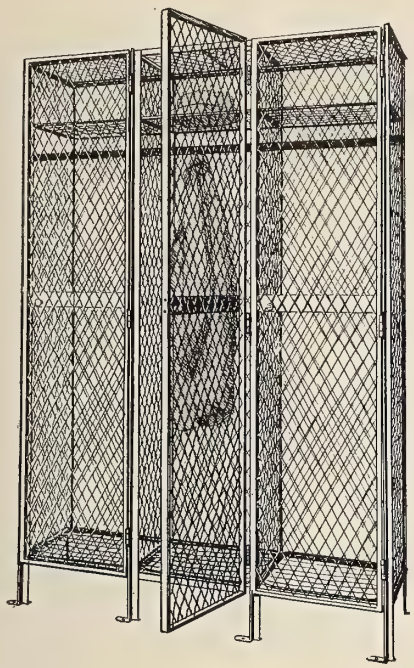
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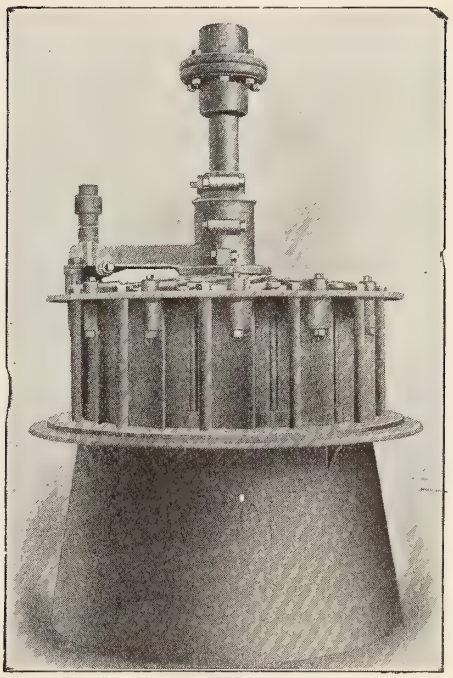
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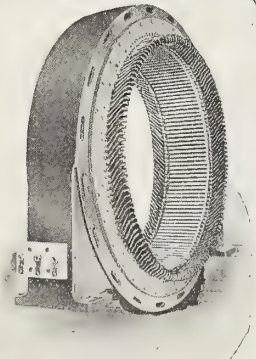
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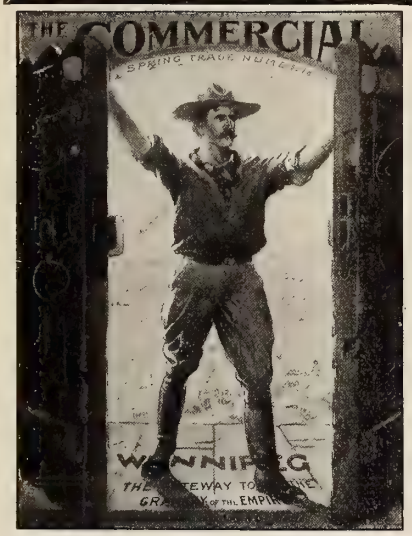
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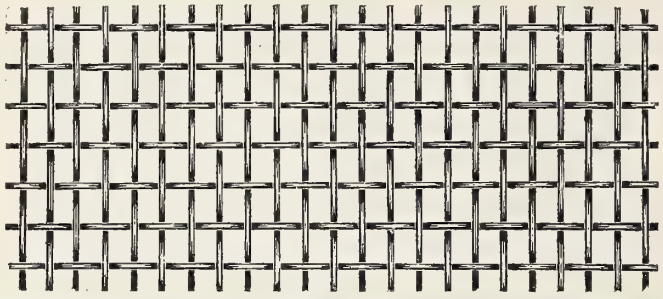
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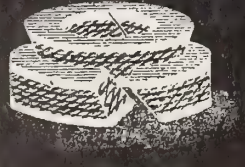
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Steel Commercial Trunks a specialty.

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Dunham	Que.
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Galt	Ont.
Harrow	"
Havelock	"
Hensall	"
Linwood	"
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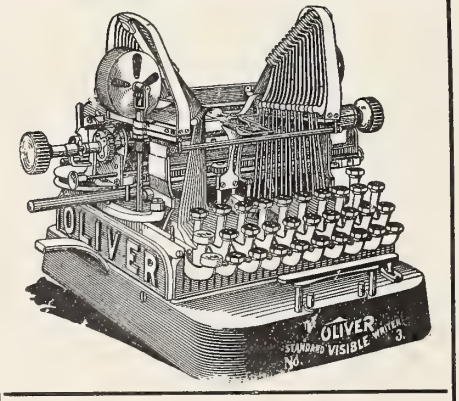
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in all

Unoccupied Territory

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¶ The "Oliver" is a standard, free typebar, visible writer.

¶ The record of the "Oliver" has never been equalled.

¶ The largest users of typewriters in Canada use the "Oliver."

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¶ Purchasers of the "Oliver" save from $25 to $30 in Duty over all other standard typewriters.

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Industrial Canada.

ISSUED BY

The Canadian Manufacturers' Association,
Incorporated.

"There be three things which make a nation great and prosperous: A fertile soil, busy workshops, and easy conveyance for man and goods from place to place."—Bacon.

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INDUSTRIAL CANADA

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Editor, G. M. Murray.

Advertising Solicitor, B. L. Anderson.

TRADE AND NAVIGATION REPORTS.

FROM the manufacturer's point of view perhaps the most important piece of statistical work undertaken by the Dominion Government is the compilation of the monthly reports of the Department of Trade and Navigation. These reports are, as it were, the pulse by which the commercial vitality of our country is measured. They are an indication not only of the success with which our manufacturers are supplying the home market, but also of the extent to which they are able to reach out into the wider markets of the world.

As our industries develop in size and diversity, embracing new and specialized lines of production, certain changes become desirable in the preparation of these reports. Figures which served a useful purpose a year ago may to-day be regarded as entirely inadequate. There is constantly a demand for more detailed classification of imports, and information as to the particular part of the country where those imports are being consumed. Where the possibility arises of manufacturing in Canada a class of goods that have previously been supplied altogether from outside, there is a call for figures showing the extent of the home market. Frequently these figures are not available from the published trade and navigation returns. Sometimes they can be procured by correspondence with the Department at Ottawa; sometimes they cannot. If the information is on file it is cheerfully furnished, but unfortunately it is not always on file. A convenient avenue of escape from the drudgery of minute classification is afforded through the custom of grouping seemingly unimportant articles under the heading N.E.S., and sometimes there is a tendency on the part of certain officers to take too great advantage of the opportunity therein afforded.

An instance has recently been brought to our attention which seems to imply, not so much unwillingness on the part of the Department to meet the requirements of the business man, but an entire lack of the machinery necessary for the carrying out of its orders. Nearly four years ago a prominent citizen of Toronto wrote the Minister of Customs asking for figures showing the imports of a certain mineral commodity used in the manufacture of paper, with a view to supplying the Canadian market with a superior article of home production. This commodity was known to be brought into Canada in very large quantities, but as it entered free of duty little care was exercised in keeping track of the amounts. Investigations conducted privately by the interested party disclosed the fact that shipments of the material were being passed through the Canadian Customs under half a dozen different names. No satisfactory return was possible under these circumstances, and notwithstanding the fact that he has been corresponding and agitating ever since, and has received assurances that special officers were being detailed to report upon the matter, he is still without the information he requires.

This is not the kind of treatment one would expect to receive from a Department organized in the interests of our tradesmen and manufacturers. If in the United States a similar possibility presented itself of fostering native industry and excluding foreign products, no expense would be spared to smooth the way for the prospective manufacturer. Canadian Government officials would do well to emulate the more enterprising spirit displayed by their brother-officers in the country to the South, and facilitate, to the best of their ability, the development and expansion of our industries and commerce.

SHALL THE TEN CENT MAGAZINE PAY DUTY.

SIR GEORGE A. DRUMMOND, while discussing the question of Imperial postage before the Senate of Canada recently, called attention to the serious injustice which is being done to the Canadian manufacturer and producer by the present reciprocal postal arrangements in periodicals between this country and the United States.

The average United States magazine is a book of from 200 to 300 pages, of which anywhere from 50 to 66 per cent. is advertising matter. The rapid strides which have of late years been made in the art of advertising have given to these pages an interest and a value equal to, if not greater than, the reading matter itself. They are prepared by high-salaried experts who have carefully studied human nature. They are lavishly illustrated to attract the eye, and are worded in a manner well calculated to entice the coin from him who has it to spend. They are the seed from which the advertiser hopes to reap a rich harvest, and that

he is not disappointed is evidenced by the fact that he sows his seed in larger and larger quantities every year.

To allow this advertising matter to be brought into Canada free of duty, and to be circulated gratis at the expense of the Canadian Government, is certainly an injustice to our manufacturers, producers and merchants. Yet that is exactly what is being done. When prepaid at the office of publication at the regular rates, these magazines are received by the Canadian railway mail service and forwarded to their destination free of charge. All the revenue goes to the United States Government; not one cent comes to Canada. Tons upon tons of this literature are poured into our borders every week, and scattered broadcast over the country. In handling it the Department is put to heavy expense for which there is no return. This means an additional burden upon the ratepayer, upon the very merchant and manufacturer in fact whose goods are being subjected to unfair competition. Should he desire to send advertising matter of his own through the Canadian mails he is called upon to pay a rate of eight cents a pound, whereas his foreign competitor, with all the advantages of a specialized industry and a home market that is practically unassailable, is permitted to do so gratis.

The objection will naturally be raised that under the reciprocal arrangement Canadian magazines and periodicals are accorded the same privileges in the United States. Quite true. Nominally there is a *quid pro quo*, but in reality there is not. The balance of trade in periodicals is always against Canada. A visit to almost any book store or news stand in the country will demonstrate the fact that for one Canadian periodical offered for sale there are ten United States periodicals. That being the case at home, how much greater must the discrepancy be across the border?

No doubt the present arrangement is in some respects an advantageous one. It would seem to be so at least, so far as the publishers are concerned, for it smooths the way for their foreign circulation. But the publishers have no desire to benefit unduly at the expense of other members of the community. It may be true, of course, that there are serious difficulties in the way of making any other disposition of the matter, difficulties which the general public fail to appreciate. Whatever they may be, however, in view of the positive injury which is being wrought under existing conditions, it is only reasonable to expect that the best efforts of the Government should be given to their solution.

TRADE POSSIBILITIES IN MEXICO.

WITH the single exception of Japan, no country within the past decade has made more material progress along industrial lines than has Mexico. After centuries of inactivity, she has suddenly developed a vitality and an individuality which is rapidly carrying her into the front rank of the nations of the world. In President Diaz, she possesses a ruler of remarkable executive ability, who has succeeded as no other ruler of that country has succeeded in holding the rival political factions in check, in safeguarding the life and property of the citizens, in fostering the development of the country's natural resources, and in encouraging the investment of foreign capital.

The general prosperity which has followed the adoption of such a policy is perhaps best reflected in the expansion of her foreign trade. In 1884, Mexico imported, in round figures, goods to the value of $26,000,000 gold. In 1894 this was increased to over $50,000,000, while for the fiscal year ending June, 1904, her imports reached a total of over $78,000,000, or three times as much as they were twenty years ago. In her export trade she has made even greater progress, while the diversity of the articles she now has for sale, bears testimony to the fact that her industrial development has been of a most varied and extensive character.

In addition to her silver, gold, copper and lead mines, which are being more actively worked than ever before, she possesses a valuable asset in her agricultural lands. Her annual production of maize, henequen, sugar, wheat, coffee, cotton, beans, tobacco and other field products, is valued at over $100,000,000. Manufacturing industries are springing up all over the country, and though hampered to some extent by the lack of fuel, are making steady and satisfactory progress. Woollen mills, iron foundries and steel plants are among the newer industries to be established, while of cotton mills, there are said to be 150, and over 700 cigar factories.

For a large proportion of her manufactured goods, however, Mexico must always be dependent upon the outside world, for the country is destitute of coal, and water powers are met with only at rare intervals. Herein lies the opportunity which Canadian exporters are preparing to take advantage of, and which has been placed within their reach by the action of the Government in subsidizing lines of steamships from both our Atlantic and Pacific ports. The new postal convention between Canada and Mexico should furnish an additional stimulus to the development of trade. Already a commercial tie has been established through the investment of Canadian capital in Mexican mining stocks and hydraulic power plants. The average Mexican is known to be favorably disposed towards Canada, much more so than he is towards the United States, and other things being equal, he will trade with Canada in preference to the United States. Add to all this the fact that President Diaz is putting his whole energy into the work of fostering trade between the two countries, and there seems every reason to believe that a most profitable business may in time be built up.

THE UNIVERSITY AND THE MANUFACTURER.

ON another page of this issue will be found the first instalment of a treatise on the Chemical Industries of the Dominion, which has been prepared by W. R. Lang, D. Sc., Professor of Chemistry in the University of Toronto.

A glance over the varied lines of manufacture with which Prof. Lang proposes to deal will at once suggest the importance of the part played by chemistry in the development of our national industries. As the science which treats of the composition of matter, chemistry may indeed be said to lie at the foundation of all our industries, though it is naturally associated more particularly with certain specialized forms of manufacture. The time is coming, however, if indeed it has not already come, when the application of a knowledge of chemistry to industrial processes will become more general. It is easily conceivable that the expert chemist will in time become as great a necessity to the manufacturer as the expert accountant. Just as the latter has been called in to analyze costs, to detect leakages and to systematize and improve the keeping of accounts so will the former be consulted with regard to the utilization of waste material, the manufacture therefrom of new articles of commerce, and the establishment of processes that will permit of more economical operation.

The training which will best fit the industrial chemist to serve the interest of the manufacturer is not the training of the technical school, but the training of the university. What the future of our chemical industries may be no one will venture to predict. The principles underlying them are being subjected to gradual modification. New and important industries, based upon phenomena which some few years ago were regarded as of no consequence, are to-day springing into existence. Experiments now under way will no doubt still further enlarge the field and revolutionize processes heretofore regarded as final. The man who can best keep in touch with this ever-widening sphere of investigation, who can best adapt himself to the changing requirements of modern science, is the man who has had a thorough grounding in the theoretical side of chemistry. His education must have been of a general character, embracing both organic and inorganic chemistry. He must be a man of many resources, of versatility, quick to discover new means of reaching a given end.

The graduate of the technical college, on the other hand, who

has studied applied chemistry with a view to qualifying himself for a position in some particular industry, soon finds that the knowledge he has acquired is of little use by reason of the new light which scientific research is constantly throwing upon the subject. The very foundations upon which he has built are taken from under his feet. New laws are promulgated which he is unable to reconcile with those he formerly accepted. He has not the necessary breadth of view to adapt himself to changed conditions, and if he is to continue to do efficient work he must periodically begin his weary round of studies over again.

In other forms of industrial education the technical school serves a most useful purpose, though for the training of the chemist who is to work in conjunction with the factory superintendent, a university education is essential.

The university can be of untold value to the manufacturer by supplying him with young men of ability who have been trained along scientific lines. On the other hand the manufacturer can be of great assistance to the university by making it known he is ready to give positions to such men. A university education is at the present time a luxury which many feel they cannot afford, for the reason that, apart from an academic career, it offers no means of earning a livelihood. Were it known, however, that through it the door would be opened to industrial pursuits that would prove remunerative, the attendance of ambitious and talented young men at our universities would be greatly stimulated.

It is very desirable, therefore, that these two sections of the community should be brought into closer touch with each other; that they should learn to co-operate in the education of our young men and in the development of our industries, for by so doing they would not only be serving their own best interests, but they would be adding to those finer qualities which make for unity and national greatness.

WE HAVE INTEREST TO PAY.

A CABLE despatch of March 3rd says that Colonial Secretary Lyttleton, speaking at the Birmingham Chamber of Commerce, said the debt of the self-governing colonies alone to Great Britain was three hundred and ninety-nine million pounds sterling, and that there had never been any default in the payment of interest in a single case. It could not be truly said that no private corporation of the colonies owing money in Great Britain ever defaulted in payment of interest, but the Colonial Secretary evidently refers to public indebtedness, national, provincial and municipal. Three hundred and ninety-nine million pounds sterling is equal to about $1,541,933,000. In addition to this, British capitalists have many millions invested in stocks and bonds of colonial railway, mining and industrial enterprises, on which they annually draw dividends and interest.

There are two points worthy of consideration in connection with this fact. The first is that in order to be able to pay this enormous amount of interest annually the colonies ought to export a great deal more than they import. If the goods we export are only equal in value to the goods we import where will the money come from with which to pay our interest? As a matter of fact our imports often exceed our exports in value, and this cannot be long continued without causing great financial difficulties. The second point is that just because the people of the United Kingdom have vast sums of money out at interest, or invested not only in the colonies, but in all parts of the world, and derive an immense income from these loans and investments, they are able to continue year after year importing more goods than they export. If Canadians had enormous sums out at interest in every part of the civilized world they might also be in a position to import more merchandise than they export without disastrous consequences.

THE CANADIAN INDUSTRIAL LEAGUE.

THE banquet of the Canadian Industrial League in Halifax on February 7th was a very great success, the most prominent business and professional men of Halifax of both political parties being present and heartily applauding everything that was said in favor of protection for Canadian industries.

Mr. W. K. George, President of the Canadian Manufacturers' Association, who replied to the toast of "Canadian Industries" in a most interesting and instructive address, was most vigorously applauded by Liberals as well as Conservatives when he said: "Gentlemen, we believe that by a just, wise and fair revision of the tariff—adjusting it to present day necessities and conditions, a great increase and development could be made in Canadian industries which would be beneficial to all and burdensome to none. We have asked for that revision along lines that will safeguard the interests of all sections of the community, whether agricultural, mining, fishing, forestry or manufacturing, as will best conserve and advance the interests of the whole Dominion, and we continue to press for prompt action. The government has answered that it will appoint a commission to examine into the whole question—we ask that that be done without delay, feeling that time and opportunity valuable to our country are passing. Give to your Canadian manufacturers in the way of protection just what is necessary to equalize the disadvantages under which they labor as compared with their competitors, either in the way of dearer labor or smaller market, or whatever it may be; assure to them an opportunity of securing their home market on a fair but not exorbitant basis—and you will soon see a great advance in the manufacturing industries of this country, furnishing employment to tens of thousands of hands; transforming hamlets into villages—villages into towns—towns into cities—doubling and quadrupling our own home market—not only for the produce of our fields, but for the products of our factories—utilizing to a fuller extent and to a higher degree those magnificent resources with which a beneficient Creator has endowed our land."

Hon. Mr. Longley, a member of the Liberal Government of Nova Scotia, who is president of the Halifax branch of the League, presided, and several other members of the Nova Scotia Government supported him. When it is remembered what strong free traders the members of the Nova Scotia Government were a few years ago, the change of attitude must be regarded as extraordinary. These men are shrewd politicians. As the Provincial Legislature cannot legislate on the tariff, members of the Nova Scotia Government could easily find excuses for saying nothing publicly on the tariff question. A few years ago they considered it good policy from a party point of view to say a great deal against protection. Now they consider it wise policy to publicly endorse this policy. Why? Because they know that the general sentiment of the people in Nova Scotia is now emphatically in favor of protection and that they cannot lose votes by publicly declaring themselves to be protectionists. Therefore their outspoken advocacy of protection not only indicates a remarkable change of opinion on their own part, but also an extraordinary revolution in popular sentiment. This is a sign of the times that the politicians at Ottawa should heed.

The Canadian Industrial League is an organization which aims to encourage a spirit of national co-operation among workers in the various industries of Canadian farms, forests, fisheries, factories, mines, railways and the mercantile and professional classes dependent on them. It includes Canadians of both political parties who believe in tariff protection for all Canadian industries, the use of Canadian ports in preference to foreign ports, the improvement of Canada's internal and external transportation facilities and Government regulation of railway rates. "Made in Canada" is the watchword of the League, and every member signs a declaration agreeing to support by his vote and influence the principle of tariff protection for Canadian farming, mining and manufacturing industries, and promising to give the products of Canadian labor the preference over foreign products in making purchases. Branches of the League have been

established in a large number of towns, and with one exception in every one of these towns the leading business and professional men of both political parties have co-operated to make the movement a success. In the first place, and, indeed, until very recently, the organizers had often to contend with the opposition of politicians who tried to prevent Liberals from joining, but in spite of this opposition the Liberals did join, for the people were in advance of the politicians. The weight and influence of the Liberals who joined this movement, men who were not themselves personally interested in manufactures, astonished the professional politicians. While special reference has been made to the Liberals who have joined the League as indicating a revolution in public sentiment, it should also be noted that the Conservatives have everywhere heartily supported the movement.

The aim of the Canadian Industrial League is to raise the question of protection for home industries above party politics, to make protection the established policy of the country so that no matter which party is in power the workingmen of Canada may have steady employment and our farmers a certain home market, while our manufacturers may be sure that if they invest their capital in the extension of their industries it will not be lost by some sudden change in the political situation.

There was a time when the protectionists in Canada were nearly all in one party. This is no longer true. There has been a great revolution of sentiment on this question, and it is now generally acknowledged that however advantageous free trade may be under certain circumstances, the conditions in Canada are such that protection for home industries is a national necessity. This being the case, Canadians should stand together in time of peace as they would in time of war, to defend home interests.

"REMOVAL OF DUTY ON MACHINERY."

Canadian Machinery, a Montreal periodical, publishes a letter from a correspondent who says:

"Every few days one hears the announcement of some American firm starting up in Canada, or a Canadian branch being formed to carry on manufacturing of materials and machinery now made solely across the border. This is an effort that deserves some attention and a good deal of encouragement, as it means much to the development of this country. These enterprises require a large amount of machinery of a class not made in Canada, and at present they are handicapped by a duty. Would it not be good policy to advocate the removal of the duty on all machinery coming under this category, and thus stimulate Canadian manufacture? I have been thinking of this matter for some time, and would like to see some move made in that direction."

A Canadian machinery manufacturer writes to INDUSTRIAL CANADA as follows in reference to this: "After the hundreds of thousands of dollars in duties already paid by existing manufacturers in Canada on machinery which was not made in Canada, but is now, why should we 'bump' ourselves in order to make it easy for somebody whose motive we are not sure of."

That is good sense. No absolute rule can be laid down applicable to all kinds of machinery. There may be some kinds of machinery for which the demand in Canada is so small that at the present stage of our development it would be impossible to undertake the manufacture in Canada, but there are very few cases of this kind and the number is decreasing every year. Canadian governments have generally erred in the direction of making the free list too large rather than too small. The representative in Canada of a large machinery manufacturing company of the United States which makes machinery of a kind not now made in Canada, recently told the editor of INDUSTRIAL CANADA that in case the Canadian customs tariff should be generally increased at the next session of Parliament, his company would establish great works in Canada, employing at least three thousand men, and probably five thousand. He said the matter had been thoroughly discussed at headquarters, and the conclusion arrived at was that a general increase in the Canadian tariff would cause such a rapid development in all lines of Canadian manufacturing that the demand for machinery would be enormous. We want a policy that will cause machinery to be manufactured in Canada instead of one which will make it easy for manufacturers to get machinery from the United States.

LABOUR UNION LABELS.

AN Act respecting Labour Union Labels, the purpose of which is to protect and place a stamp of legality on the Union Label, is now before the Dominion Senate. The Bill is not a new one. It has been previously discussed both in the Commons and the Senate, the Commons at one time going so far as to pass it just as presented.

This year the Commons took an entirely different attitude. It was discussed on three different occasions. Mr. Ralph Smith, M.P., who introduced it, was practically without support in his effort to have it carried. The House did not discuss the principle of the Union Label, nor whether it was right or just that any labour organization possessing absolute control of the label, and using the same to obtain control of open shops, should have legal sanction for its weapon and its methods. The attention of the House was confined to the liability of the Union for its wrongful acts and the Bill was amended by limiting its application to Trade Unions that were duly incorporated.

We believe that four-fifths of the members of Parliament were opposed to the principle of the Bill. The "incorporated" amendment, although vigorously objected to by Mr. Ralph Smith, M.P., and Mr. Hugh Guthrie, M.P., was carried by a vote of 49 to 13. This vote expressed the general feeling of opposition that existed.

The Bill as amended has been forwarded to the Senate for consideration. When discussed by the Upper House in 1903 (where in that year it was introduced), the principle of granting a Trade Mark to Union Labels was declared to be unsafe and undesirable and the Bill was thrown out. The Unions this year have had their Bill introduced to the Commons in the hope that with the added prestige of the approval of the Commons, it will meet with more favor in the Senate.

The Bill is asking for the approval of the same principle that was considered unreasonable by the Senate in 1903. The only difference between the conditions in 1903 and to-day, is that during the intervening period, the label has come to play a more important part in shop management and boycotts. What was considered unsafe in 1903, therefore, must be regarded as positively dangerous in 1905.

THE NEXT ANNUAL MEETING.

BY a unanimous vote, the Executive Council of the Association has decided to hold the next Annual Convention in the city of Quebec. The announcement of this decision has been received with the most cordial approval in all parts of the Dominion, and even now the members of the Association are looking forward with keen pleasure and interest to the approaching meeting in the old fortress capital.

The magnificent growth of the Association, and the expansion of its work even since the last Convention, justify the expectation that the meeting in Quebec will be one of the most successful ever held; while the many attractions of the old citadel, and the famed hospitality of the citizens of Quebec, lend an added interest which will attract a large representation from every part of Canada. The date of the Convention has not yet been decided, but it will in all probability be announced in our next issue. In the meantime let us look forward to a well filled programme, an enthusiastic gathering and a good time.

Executive Council

FEBRUARY MEETING.

Quebec Chosen as the Place of Annual Meeting—Objection Taken to the Circulation of United States Silver—Foreign Correspondents Appointed—Additions to the Office Accommodation.

Executive Council.

The regular monthly meeting of the Executive Council, Canadian Manufacturers' Association was held in the Council Chamber, Board of Trade Building, on Thursday, Feb. 16th, 1905, at 2 p.m.

The following members were present:—Messrs. Geo. Booth, Toronto; P. H. Burton, Toronto; C. N. Candee, Toronto; Robt. Crean, Toronto; H. Cockshutt, Brantford; J. W. Cowan, Toronto; Richard A. Donald, Toronto; John F. Ellis, Toronto; P. W. Ellis, Toronto; Geo. D. Forbes, Hespeler; E. G. Henderson, Windsor; W. R. Landon, Chatham; R. O. McCulloch, Galt; D. T. McIntosh, Toronto; John S. McKinnon, Toronto; W. K. McNaught, Toronto; Jas. Maxwell, St. Marys; J. P. Murray, Toronto; A. S. Rogers, Toronto; John M. Taylor, Guelph; A. W. Thomas, Toronto; J. O. Thorn, Toronto; C. H. Waterous, Brantford.

In the absence of the President and the First Vice-President, Mr. J. O. Thorn, Ontario Vice-President, occupied the chair.

Communications.

Communications were received from the following members of the Council unable to be present:—Messrs. W. K. George, C. C. Ballantyne, Geo. E. Drummond, Geo. E. Amyot, H. L. Hewson, Jas. Pender, Geo. Heintzman, Henry Wright, R. J. Christie, Frederic Nicholls, T. H. Smallman, F. B. Polson, J. T. Sheridan, R. C. Wilkins, C. Bermingham, A. Saunders.

A letter was received from Sir William Mulock, expressing his appreciation of the resolution passed at the January meeting of the Council with reference to the new Canadian-Mexican postal service.

A letter of thanks was received from Mr. E. H. Cooper, the late Secretary of the Montreal Branch.

A letter was presented from Mr. J. O. Thorn with reference to the approaching conference to be held between representatives of the Dominion Trades and Labor Congress and of this Association, and resigning his position as one of the representatives. This was laid over to be dealt with at a later stage of the meeting when a report upon this matter should be presented.

The reports of the various officers and committees were then presented as follows, and with the amendments as reported were regularly adopted:—

Treasurer.

The report of the Treasurer was presented by Mr. Geo. Booth. It involved the financial statement up till January 31st, 1905.

Secretary.

The report of the Secretary covered a number of important matters and events which had transpired during the month.

The Insurance Department had been organized and was now in active operation.

The new Montreal Secretary had assumed his duties with every prospect of success.

The series of luncheons in Toronto and Hamilton had been particularly successful.

With regret the resignation of Mr. C. N. Bell, Secretary of the Manitoba Branch, had been received and it is expected that a successor will be appointed in the near future.

The Association had been pleased during the past month to welcome a large number of its members engaged in the lumber trade in British Columbia, and to assist them in making their representations on the tariff question at Ottawa.

During the month the Executive Council had been called upon to mourn the loss on one of its members in the person of Mr. J. B. Henderson, who was for many years an active and prominent member in the Association.

Finance Committee.

The report of the Finance Committee was also presented by the Secretary.

It recommended for payment the regular monthly expenditure and provided for the securing of two additional offices for the Association in the Board of Trade Building, for an illuminated address to be presented to His Excellency the Governor General upon his approaching visit to Toronto, and for special stationery for the Transportation, Insurance and Industrial Canada Departments.

Industrial Canada Committee.

The report of the Industrial Canada Committee was presented by the Chairman, Mr. A. W. Thomas.

It stated that up to the present time the paper had not been quite self-sustaining, but that its wonderful progress from a four page issue to a full fledged magazine must be looked upon with considerable gratification, and its usefulness and influence was now being recognized from one end of Canada to the other.

The Committee had received with regret the resignation of Mr. Geo. A. Howell, Vice-Chairman of the Committee, and recommended the appointment of Mr. Geo. Brigden in his place. By unanimous consent, Mr. C. F. Wheaton of the Dodge Pulley Mfg. Co. was added to the Committee.

Special consideration had been given at the last meeting to securing editorials for the paper upon a number of important subjects.

Articles for the immediately succeeding issues were approved.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. Robt. Crean.

The report recommended for acceptance thirty-seven new members and reported that the plans for the British Excursion were progressing successfully.

The report invited an expression of opinion from the members of the Council as to where the next annual meeting of the Association should be held. The Chairman asked for the opinion of the members and around the board only one response was heard, namely Quebec. It was then moved by Mr. McNaught, seconded by Mr. Booth that Quebec should be chosen for the next place of meeting. This motion was carried unanimously and with enthusiasm.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by the Secretary. It outlined the work of the Committee in its opposition to the Union Label Bill. No aggressive measures were being advanced by the Association—the Committee had simply exerted its efforts to defend the rights of the manufacturers of Canada.

An enquiry circular to ascertain the condition of the Canadian labor market was being sent out to all the members.

With further reference to the removal of United States silver coinage from Canada, the Committee presented the following resolution which was carried unanimously:—

"That as it is in the interests of Canada for reasons both financial and patriotic, that the coinage in use shall be Canadian, be it resolved that the Dominion Government and the Chartered

Banks of Canada be respectfully urged to co-operate in the removal from circulation in Canada of all foreign silver coinage, and that copies of this resolution should be forwarded to the Honorable the Minister of Finance and the President of the Bankers' Association of Canada."

Commercial Intelligence Committee.

The report of the Commercial Intelligence Committee was presented by the Chairman, Mr. A. S. Rogers.

It announced a number of details in connection with the approaching exhibition at Liége, Belgium. These particulars were published in the last issue of INDUSTRIAL CANADA.

The report also recommended the appointment of foreign correspondents in the following countries:—Holland, Switzerland, Austria, Denmark, Scandinavia, Egypt, Japan, South Africa, Australia and Tasmania.

It was announced that a circular would be issued to the members of the Association at an early date asking them to forward to the Head Office any suggestions regarding changes desired in the classification of the Government Trade and Navigation Returns.

The Committee also announced that they were following up certain telegraphic dispatches which have been recently received in Canada complaining of the quality and packing of shipments of Canadian manufactured goods with a view to ascertaining the facts and correcting any false impressions.

Railway and Transportation Committee.

The report of the Railway and Transportation Committee was presented by the Chairman, Mr. H. Cockshutt. It appears in another column of this issue.

Insurance Committee.

The report of the Insurance Committee was presented by the Chairman, Mr. P. H. Burton. This report also appears in another column.

In closing his comments on the report, the Chairman introduced the new Manager, Mr. E. P. Heaton, to the Council. Mr. Heaton was received and listened to with pleasure as he reported briefly on the progress and prospects of his Department.

Labor Conference.

Mr. P. W. Ellis reported in this matter that three meetings had been held and that satisfactory progress had been made. Having learned that he was to be absent from Canada during the next two months the representatives of the Trades and Labor Congress had requested that the Conference should be postponed until his return. This was unanimously agreed to.

A letter was presented from Mr. J. O. Thorn asking that the Council should accept his resignation as a member of the Conference. On motion of Mr. Burton, seconded by Mr. Donald, the resignation was accepted and Mr. F. B. Polson appointed in his place.

Branches.

The reports of the Montreal and Toronto Branches were presented by the Secretary and Mr. Richard A. Donald respectively. Both of these appear elsewhere in summarized form.

It was unanimously agreed that resolutions of condolence should be forwarded from the Executive Council to the families of the late Messrs. J. B. Henderson and Octavius Newcombe.

The meeting then adjourned.

RAILWAY AND TRANSPORTATION COMMITTEE.

A meeting of the Committee was held on the 15th of February, and the following is report of the questions submitted and considered.

New Zealand Service.

The request for approval of the Association of the suggested change in route of the Canadian-Australian line from Vancouver, cutting out Brisbane, Australia, and calling at Auckland, New Zealand, was carefully considered, and it was decided to recommend to the Executive Council that the change be approved for the following reasons:—

(1) The preferential tariff granted by New Zealand and the greater opportunity for exchange of commodities between the two countries resulting therefrom.

(2) The Government of New Zealand is willing to subsidize the line, provided steamers call at a New Zealand port, whereas the Queensland Government is anxious to escape payment of subsidy voted to the line.

(3) The advantages to Canada accruing through direct service to New Zealand will more than offset the disadvantage of service to Brisbane through the port of Sydney, Australia.

(4) The desirability of cheapening cost of transportation to and from New Zealand through a Canadian port and by a Canadian line, as against the service by way of Atlantic seaboard through the port of New York.

Rates to C.P.R. Points in New Brunswick.

Attention was called to certain reductions in rates on general merchandise to points in New Brunswick north of the Canadian Pacific Railway main line, which to some extent remove a difficulty which has been the subject of complaint by some members. It is pointed out, however, that from points west of Montreal rates to Fredericton, formerly on the main line basis, have been advanced to an arbitrary basis over main line rate. This increase is viewed with dissatisfaction, and the Committee is of opinion that a further adjustment should be made.

Interchange Switching.

The assistance of our Association has been asked in connection with a proposal for interchange switching arrangements between the Canadian Pacific and Grand Trunk Railways at Guelph, involving the construction of connecting track. Similar arrangements are asked at Galt, Preston, Berlin and other points. It was the opinion of the Committee that this was a very important and progressive move in connection with transportation, in which manufacturers generally are interested almost to the same extent as those who are located at the several points mentioned. It was decided to assist the interested members as far as possible in securing desired arrangements.

Demurrage.

The Manager of Transportation reported the result of his investigations on the subject of demurrage, including comparison of Canadian Car Service Rules with those of United States car service associations and of state railway commissioners, and outlined the attitude to be taken by the Association before the Board of Railway Commissioners on this question. The report was unanimously concurred in by the Committee.

Canadian Shipments via Subsidized Lines.

Attention was drawn to the fact that Canadian shippers had been refused space for shipments on lines subsidized by the Canadian Government. It was decided to recommend to the Executive Council that the Canadian Government be requested, where subsidies are granted to steamship lines, that provision be made to have space held open for Canadian shippers up to a specified period prior to date of sailing, say 10 days via the port of Montreal and 15 days via the port of St. John or Halifax.

Report was made by Manager of Transportation of various matters dealt with during the month of general and individual interest.

MONTREAL BRANCH.

Two meetings of the Montreal Branch were held since the date of the last report.

Change in the Secretaryship.

The first, a special meeting, was called on January 30th, for the purpose of presenting an illuminated address to the retiring

Secretary, Mr. E. H. Cooper. The Chairman, in presenting the address, spoke in high terms of the services rendered by Mr. Cooper during his four years' connection with the Association.

The new Secretary, Mr. Dakers Cameron, was then introduced to the members.

The regular monthly meeting of the Montreal Executive was held on February 9th. Mr. J. J. McGill occupied the chair, and there were also present: Messrs. C. C. Ballantyne, Geo. Esplin, J. S. N. Dougall, J. H. Burland, O. Faucher, S. W. Ewing, Clarence F. Smith and J. H. Birks.

The report was presented of a very successful "Smoker" held on January 17th, at which a number of the manufacturers had met the Mayor and some of the Aldermen, and discussed with them the question of the increasing taxation in the city.

United States Magazines.

An informal discussion took place with regard to the free circulation in this country of United States magazines filled with United States advertisements. It was felt by the committee that it was decidedly unfair that all the receipts from the postage on such magazines should go to the United States Government, and that the Canadian mail service should circulate United States advertising matter without receiving any financial benefit therefrom.

The Union Label Bill, and a proposed amendment to the Domonion Elections Act were discussed, but no action was taken.

Three applications for membership were passed.

TORONTO BRANCH.

The regular monthly meeting of the Executive Committee of the Toronto Branch, was held on February 9th. Mr. Richard A. Donald presided, and other members present were: Messrs. W. B. Tindall, J. P. Murray, P. W. Ellis, J. O. Thorn, C. N. Candee, A. S. Rogers, Jno. S. McKinnon, S. R. Hart, P. H. Burton, Robt. Crean, Ed. J. Freyseng, J. W. Cowan and C. B. Lowndes.

Toronto Civic League.

The constitution of the newly formed Toronto Civic League was considered and endorsed. One important object of this League is to impress on citizens generally the importance of our manufacturing and commercial industries and their need for support. The representatives of the Toronto Branch in this organization were asked to report regularly to the Executive Committee regarding the different matters under consideration.

Exemption on Machinery.

Mr. Donald reported for the Committee appointed to interview the Board of Control regarding the exemption of machinery from taxation. He stated that the Board had promised to give the matter early attention.

Election Night Dinner.

The Chairman of the Election Night Dinner Committee, Mr. Ed. J. Freyseng, presented a report of the finances of that function, which was in every way satisfactory.

Traders' Week in Toronto.

Regarding an interview which had been had with the Passenger Traffic Managers of the Canadian Railways in Montreal, with reference to securing special rates for Traders' Week in Toonto, Mr. J. S. McKinnon reported that the railways had not seen their way clear to grant their request, but that negotiations were still pending, which, if they met favor with the railways, would be of considerable advantage to the wholesale and manufacturing trade.

Electric Power.

Mr. P. W. Ellis reported regarding the work that is being done by the Ontario Power Commission, and suggested that a letter be sent to the members of the Association in cities and towns in Western Ontario, who had supported the Commission, giving a short statement of the work accomplished up to the present time. This suggestion was approved of.

Seven applications for membership were favorably reported on.

Mr. J. O. Thorn brought to the attention of the meeting several resolutions that had been passed by the Association regarding different important subjects, and a resolution was approved of as follows:—

That the Toronto Branch of the Canadian Manufacturers' Association request the Executive Council to again urge upon the Dominion Government the necessity—

1st. Of having the Canadian Commercial Agents revisit Canada at reasonable intervals in order to make themselves thoroughly conversant with existing conditions, and that Mr. J. S. Larke, the Canadian Commercial Agent in Australia, who has not been in Canada for many years, be given an opportunity of returning this year and visiting as many as possible of the exporters in this country.

2nd. That the Dominion Government be again urged to deal promptly with the question of establishing a Canadian Trade Building, and Commissioner in London, England.

3rd. That the Dominion Government be requested to at this session bring in an amendment to the Railway Act, whereby express companies will be placed under the jurisdiction of the Railway Commission.

4th. That the Dominion Government be again urged to arrange at the earliest possible moment for a fast Atlantic steamship service between Canada and Great Britain.

5th. That we express our hearty approval of the efforts made by the Dominion Government to increase our export trade with Mexico by the reduction in postage rates, by the appointment of a Canadian commercial agent, and by the arrangements that have been made for the early establishment of an Atlantic steamship service to Mexico, which we hope will be put into operation upon the opening of navigation at Montreal.

6th. That we request the Dominion Government to make a special effort to arrange for a service from our Eastern ports to Australasia.

7th. That copies of this resolution be forwarded to the Prime Minister and to the Ministers presiding over the departments interested.

37 NEW MEMBERS.

Passed by the Executive Council, February 16th, 1905.

Edmonton, N.W.T.

W. H. Clark & Co.—Sash, Doors, Office and Store Fittings.

Enderby, B.C.

The Columbia Flouring Mills Co., Limited.—Flour and Feed.

Fraserville, Que.

The St. Lawrence Furniture Co.

Hamilton, Ont.

Bowes, Jamieson & Co.—Stoves.
The Burton & Baldwin Manufacturing Co., Limited.—Interior Woodwork.
Canada Ready Print Co.—Ready Print Newspapers.
Fowlers Canadian Co., Limited.—Pork Products.
The Hamilton Distillery Co., Limited.—Distillers, etc.
Hamilton Paper Box Co.—Paper Boxes.
The Herald Printing Co. of Hamilton, Limited.—Publishers.
G. B. Perry Knitting Co.—Ladies' and Children's Ribbed Underwear.
Pure Color Company, Limited.—Pigments, Dry and Paste Colors.
Charles Reid & Co.—Paper Boxes and Paper Sundries.

London, Ont.
THE PANDORA CAP CO., LIMITED.—Hats and Caps.
J. R. SHUTTLEWORTH.—Hats.

Midland, Ont.
PLAYFAIR & WHITE.—(Jas. Playfair, 2nd Member).

Montreal, Que.
INTERNATIONAL RAILWAY PUBLISHING CO., LIMITED.—Fine Printing, Guide Books and Railway Tickets.
LEAK FUR MANUFACTURING CO. OF CANADA, LIMITED.—Fur Coats and Robes.
ST. LAWRENCE ADD CO.—Posters, Signs and Stencils.

Ottawa, Ont.
RIDEAU MANUFACTURING CO.—Blouses, Skirts, etc.

Peterboro, Ont.
THE DICKSON CO'Y.—Lumber, Lath and Shingles.

Port Arthur, Ont.
THE PIGEON RIVER LUMBER CO.—Lumber, Lath and Shingles.

Prescott, Ont.
JAMES S. ELLIOTT & SON.—Caskets and Lumber.

Sudbury, Ont.
A. B. GORDON & CO.—Logs and Timber.

Toronto, Ont.
THE BREDIN BREAD CO., LIMITED, OF TORONTO.—Bread.
THE CONSUMERS' BOX & LUMBER CO'Y.—Wooden Boxes and Shooks of all kinds.
THE GILCHRIST CLOTHING, LIMITED.—Clothing.
E. G. HACHBORN & CO.—Clothing.
GEO. S. MCCONKEY.—Confectionery, etc.
ONTARIO WIND ENGINE & PUMP CO., LIMITED.—(Edward Fairbairn, 2nd Member).
D. ROBERTSON & CO.—Lime.
UNIVERSAL SPRING MOTOR CO., LIMITED.—Electric and General Motors.
WARREN BROS.—Sweaters, Toques, Jerseys and Sashes.
WARREN BROS.—(Ed. Burns, 2nd Member).

Vancouver, B.C.
B.C. MILLS, TIMBER & TRADING CO., LIMITED.—(Arch. Guthrie, 4th Member).
MCLENNAN, MCFEELY & CO., LIMITED.—Stoves and Ranges.

Walkerville, Ont.
MURPHY IRON WORKS.—Mechanical Furnaces.

AUSTRALIAN DUTY ON CATALOGUES.

Numerous complaints have been made with reference to the vexatious customs regulations surrounding the importation of catalogues and price-lists in Australia. The difficulty seems to consist, for the most part, in the failure of the outside public to understand the procedure which requires to be gone through. This is explained very fully by Mr. D. H. Ross, of Melbourne, in a recent report to the Department of Trade and Commerce.

Mr. Ross states that a duty of 3d. per pound has for some time been payable on all bulk parcels of advertising matter entering Australia. On May 25th, 1903, the Commonwealth Customs Department made an important regulation which provided that catalogues might be forwarded from foreign exporters singly, without payment of duty, to merchants who acted as exporters' agents, and who would in consequence have general use for such catalogues.

It was found that this concession was being very largely abused, particularly by medical firms, and last year it was decided that all printed matter coming under the headings of catalogues, price-lists or other advertising matter, should be liable to duty at the rate of 3d. per pound, with a minimum of ½d. on any packet posted singly. It is provided, however, that the sender may pay duty on the aggregate weight of any number of packages, however small, posted at the one time, instead of paying on each separate packet at the minimum rate of one ½d. or over.

In such cases, Mr. Ross explains, it is necessary for the sender to stamp each separate packet, for distribution in the State of (say) Victoria, in the following manner:

Posted by
John Smith & Co.,
75 Collins Street,
Ottawa, Canada.
Duty sent to D.P.M.G., Melbourne.
Date (same as per post mark).

Packets for distribution in South Australia would read Adelaide instead of Melbourne; for Western Australia it would be Perth; for Tasmania, Hobart; for New South Wales, Sydney; and for Queensland, Brisbane.

The bag for Victoria should then be weighed, the duty assessed at the rate of 3d. per pound, and the amount of the duty remitted to the Deputy Postmaster-General at Melbourne, by money order, together with letter of advice. Similarly in the case of bags for the other States, in each case the money being remitted to the D.P.M.G. at the State capital.

"Tons of catalogues," writes Mr. Ross, "have not been delivered by the Commonwealth postal authorities owing to the fact of the addressees refusing to pay the Customs duty of 3d. per pound. I have so far requested the Deputy Postmaster-Generals in the States of Victoria, Tasmania, South and West Australia, to furnish me with a list of the Canadian catalogues (and the duty payable thereon) which are awaiting delivery, in order that I may be in a position to inform the addressers of the amount of duty which they should forward to ensure their deliverance. After a reasonable time, the postal authorities will destroy all catalogues upon which duty has not been paid."

TRADE PUBLICATIONS.

Aluminum Ware.—The annual catalogue of the Canadian Aluminum Works, Limited, of Montreal, contains some interesting information with regard to the advantages claimed for utensils made from this material over other kinds of kitchen ware, chief among which are that they are entirely free from poison and will not rust. A bewildering assortment of articles made from aluminum is shown in this catalogue, illustrating the importance which the material has acquired as an article of commerce.

Knitted Goods.—What's in a name? Some will say there is very little, but evidently The Knit-to-Fit Manufacturing Co., Montreal, has opinions of its own on this subject. A glance through their catalogue of combination suits, hosiery and sweaters makes one think they are endeavoring to live up to the ideal embodied in their name.

Paints.—The 1905 price list of the Canada Paint Co., Limited, is a concise and business-like publication. The compilers have been fortunate in the selection of their cover, which is not only attractive in the simplicity of its design, but strikingly suggestive of the nature of their wares. Supplementing it they have issued small booklets containing samples of their colors which, to the lay mind at least, are exceedingly handsome.

Ranges.—The Walker Steel Range Co., Windsor, have favored us with some advance sheets of their first attempt at catalogue-making, in which they announce that their new plant, just completed, is thoroughly modern and complete in every way. Their stoves and ranges, they say, are replete with special features, a statement which seems to be borne out by the handsome photogravures of their samples.

ch, for retiring

Insurance Department

"PREVENTION IS BETTER THAN CURE."

In other words, "A Proper Equipment to Prevent Fire" is better than "An Insurance Policy to Pay for Loss by Fire."

The Insurance Department, having been organized, has issued a circular to all the members enumerating the lines upon which it may be found of immediate service.

It will readily be understood that this circular was issued primarily to notify our members of the organization of the Department and was limited in its suggested scope of operations to those features of work which could be safely and satisfactorily undertaken at the outset.

Reference is made in the minutes of the meeting of the Executive Council to a report received from the Insurance Committee, and in order that the members may be kept informed of the work that is before the Department, and the progress that is being made, the following extracts are published from that report:—

"The Committee feels that full and ample time should be taken to carefully consider, with the assistance and advice of the manager they have chosen, the whole situation, and that no move of a definite nature should be made in any direction, other than indicated in the circular already issued, until they are reasonably sure of their position and with every confidence that success is reasonably assured. In adopting this cautious policy, and proceeding slowly but surely, the Committee believes it is acting in the best interests of the Association, and that its decision will be approved.

"Meanwhile, it will be of interest to the members to know that the circular already issued has called out sufficient general enquiry and response to indicate that the department is likely to be taxed to its fullest capacity. In the few days that have elapsed since the circular was issued, the manager has examined and reported upon the policies of six manufacturers with a total insurance of $382,000. He has inspected and reported upon the physical condition of four of these establishments and in one case was able to indicate certain improvements which could be carried out at comparatively slight cost and which when carried out would secure a reduction in rate of over 50% of the premium paid; whilst in another by judicious re-arranging of the insurance, a saving of over 30% was effected.

"The department has also had brought to its attention two large establishments which by reason of construction and protection, are eligible for insurance in the New England Mutuals and which apparently unreasonable treatment by the licensed companies, threaten to drive there. Realizing the importance of retaining the insurance on these, and all similar risks in this country, and at the same time affording to our manufacturers absolutely safe insurance at reasonable rates, an effort is being made to get the companies and the insured together, in the two cases mentioned, involving a total insurance of over $450,000, in the hope that mutual concession will accomplish the desired end.

"The latter feature is mentioned particularly to indicate one special use to which the department can be put, also to enable the Committee to emphasize the suggestion that a remedy for high rates is at once found, in the larger establishments at least, in installing a system of automatic sprinklers. Automatic sprinklers are recognized as the modern and only effectual means of subduing a fire at its inception, and under this system of protection, property is safeguarded and the minds of the insured set at complete rest.

P. H. Burton, *Chairman,*

E. P. Heaton, *Manager.*

Since this report was presented to the meeting, one of the sprinklered risks referred to has, largely through the intervention of the department, and by an acknowledgement on the part of the Underwriters that its superior character warranted a concession in rate, been saved to the insurance companies licensed to do business in Canada.

There are many indications that at the next meeting of the Committee it will be possible to report additional items along this same line, and if the department is successful only in respect to matters of this particular kind, it may be safely said that it has demonstrated its usefulness and value to all concerned.

The correspondence coming to the office from all over the country, clearly and unmistakably demonstrates that our members are feeling the burden of the insurance tax, and there is a general demand for suggested means of securing relief from a necessary payment that is affecting the cost of manufacture. Simultaneously there are many suggestions made as to the proper course to be taken to secure the desired relief, some are good, many altogether impracticable and in this column it is hoped from time to time to discuss such features as seem to be of more than passing interest. It is confidently expected that the Committee, although proceeding with due caution, will each month be able to definitely record substantial progress, and more frequently than otherwise, the discussion will follow the definition of policy or the adoption of plans they are able to promulgate; sometimes the work of the Committee may be anticipated, but whether the discussion is on one line or the other it is fully expected that the column will serve a useful and practical end.

It is the contention of Underwriters that rates follow the extent of the fire waste; the material advance of rates therefore logically points to an increasing volume of loss by fire. Apart altogether from every other consideration and without any admission that excessive rates could not be minimized by other means than a decreased volume of loss, it is, alas! only too true that the total obliteration of a nation's good asset is steadily increasing; everyone will admit the truth of this statement. The people of this Dominion owe it to their

(*Concluded on page* 504).

Canadian Risks for Canadian Companies
and Fair Treatment
by
Canadian Companies for Canadian Risks.

AUTOMATIC SPRINKLERS—
AN
IMMEDIATE REMEDY
FOR
HIGH RATES

THE CHEMICAL INDUSTRIES OF THE DOMINION, 1905.

BY

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PREFACE.

Much of this paper appeared about two years ago in the *Journal of the Society of Chemical Industry*.† Recently it was communicated by request to the Canadian Institute after having been revised and, in a measure, brought up to date. A closer scrutiny of the subject matter, however, led to the conclusion that entire revisal and rewriting were necessary in order that it might present the condition of the chemical industries of the Dominion as they are at the time of publication. Every effort has been made to do this as far as possible, and the writer hopes that any shortcomings will be brought to his notice.

IN writing on such a subject as the Chemical Industries of Canada, two main considerations have been kept in mind; firstly, that the development of the industrial resources of the Dominion during the past decade has been phenomenal, and, secondly, that the extent of these developments is only fully understood by a few. While it is impossible to discuss *all* the



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industries in which chemical operations and reactions are made use of, an attempt has been made to select processes in some cases peculiar to the country, but notably the industries which owe their development to the natural mineral and vegetable resources, and to the widely scattered water power obtainable in the Dominion.

The subjects taken up may be classified as follows:—

I.—Common Salt and Alkali.
II.—The Extraction and Refining of Metals.
III.—The Manufacture of Leather.
IV.—Sulphuric Acid, Acetic Acid, Wood Alcohol, Charcoal, and Ammonia.
V.—Soap and Glycerine.
VI.—Refined Chemicals and Drugs.
VII.—Fertilisers.
VIII.—Coal-Tar and Asphalt.
IX.—Calcium Carbide, Carborundum, Corundum and Graphite.
X.—The Cement and Plaster Industry.
XI.—The Beet-Sugar Industry.
XII.—Natural Gas and Petroleum.
XIII.—Pulp and Paper.
XIV.—Asbestos and Mica.

I.—Common Salt, Alkali and Chlorine Compounds.

Sodium chloride is found in the upper silurian beds in Ontario and in the Devonian in Manitoba and Athabasca; salt springs also occur in Cape Breton and in New Brunswick, but these are comparatively unimportant sources of supply. In Ontario the salt area stretches through the counties of Middlesex, Huron, Bruce, and Lambton, large deposits being found along the shore of Lake Huron from Kincardine to Windsor. At Goderich there is a deposit 126 ft. thick, and at Windsor a well extending to a depth of 1,672 feet passes through four beds of rock salt of an aggregate thickness of 392 ft.[1] The salt is obtained by evaporation, and is of an excellent quality. The following comparison serves to illustrate the purity of the natural product:—[2]

——	Natural Salt of Goderich, Ontario.	Natural Salt of Cheshire (England).
	Per. Cent.	Per Cent.
Sodium chloride	99.687	96.70
Calcium chloride	0.032	0.68
Magnesium chloride	0.095	0.00
Calcium sulphate	0.090	0.25
Moisture	0.079	0.63
Insoluble matter	0.017	1.74
	100.000	100.000
Total impurities	0.234	2.67

The total production of salt in Canada was valued in 1892 at $162,000, in 1901 at $262,328, and in 1903 at $334,000[3] *bis.*

Apart from its use as a seasoning and as a preservative, common salt is employed in the electrolytic preparation of caustic soda and bleaching compounds.

The alkali and bleaching powder industries throughout the world are at the present time in an unsettled condition, mainly owing to the advent of electrolytic methods.[3] Wherever cheap water power is available, however, electrolytic processes will be rapidly developed, provided the raw material is obtainable within a reasonable distance.

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(1) W. Hodgson Ellis. M.B., in "A Handbook of Canada," 1897.
(2) Wilmott. A.B., "Some Minor Minerals of Canada," 1897.
(3 *bis.*) Statistical Year Book, 1903.
(3) Chem. Tr. J., 23.8.02, 6.9.02, and 24.1.03.

† Journal of the Society of Chemical Industry, May 15th, 1903.

II.—The Extraction and Refining of Metals.

Almost every province in the Dominion possesses valuable mineral resources; these are rapidly being exploited, and among the metals produced in quantity may be mentioned iron, copper, lead and silver, nickel, arsenic, antimony, and, lastly, aluminium. These metals are found in the form of native iron, magnetic iron ore, iron pyrites, hæmatite, native copper, chalcopyrite, galena, native silver, and ores of silver, nickeliferous pyrrhotite, gold, sulphide of antimony, and arsenical pyrites.

Iron.

The iron ores of the Dominion occur at varied intervals, from Vancouver Island on the west to Cape Breton Island and Newfoundland on the east. In Nova Scotia there are particularly rich deposits, and in close contiguity to them are found the necessary materials for smelting. Hæmatites, too, are found in all parts of Canada. One of the most valuable deposits of specular iron is at Hull, near Ottawa, which assays from 64 to 68 per cent. of metallic iron. In the Appendix (Appendix I.) will be found more particulars regarding the iron ores of the Dominion.

The Canadian iron industry dates back to the establishment of the St. Maurice forges by the French Government in 1737. Many other minor plants were subsequently built, as at Batiscan, Hull, and Bois St. Paul, all in Quebec; at Furnace Falls, Mormondale, Marmora, etc., in Ontario; at Woodstock, in New Brunswick; and at Moose River, Nictaux, and Bloomfield, in Nova Scotia. They all subsequently failed, however, in consequence of the competition of Great Britain and the United States. This early failure was due as much as anything else to lack of enterprise, capital, and proper shipping facilities. The modern development of the industry may be said to date from the introduction of a protective duty on iron in 1887. The granting of bounties by the Dominion and Ontario Governments has also assisted largely in bringing about the present condition of the iron and steel industries.[4] The annual aggregate capacity of the completed and unfinished furnaces in the Dominion in 1903 was close on 1,000,000 gross tons.[5] Much of the iron produced is now being made into steel[6] by the Bessemer process. At Sault Ste. Marie there is an extensive plant with a capacity of 200,000 tons of ingots and 180,000 tons of finished products. There, steel rails are being made to the extent of 500 tons a day. This company has its own blast furnaces, and undertakes all the processes, metallurgical and mechanical, through which the metal goes in its conversion from ore to finished product.

At Collingwood, Ontario, the Northern Iron and Steel Company, which recently acquired the works of the Cramp Steel Company, have two 20 ton open hearth furnaces besides rolling mills from which will be turned out material suitable for machinists' and blacksmiths' use, finished steel bars, angles, fish plates, tie plates and small sections such as are used by many manufacturers. The Gilchrist-Thomas is the process employed, a process which allows of ores containing phosphorus, for example, to be profitably converted into good uniform steel. The ten inch mill at the Collingwood works is equipped with underground tunnels and turtle-backs for the purpose of continuous rolling, that is to say, a bar of steel will be looped from one pass of the rolls into another pass: thus a mill of this description is enabled to roll rods and long bars. The furnaces are of the latest standard design, having air cooled end blocks and slag pockets with the regenerators under the charging platform, which is of steel and concrete.[7] Recently the company has begun to convert, by "cold-drawing," steel bars into wire of various guages.

The Canada Iron Furnace Company has its principal plant at Midland, Ontario, beside several other smaller establishments in various parts of Quebec. The Midland furnace was erected during 1899-1900 on a property about 100 acres in extent, situated on the north shore of the Midland Bay. The furnace proper has a capacity of from 120 to 140 tons a day of "Midland Brand" Foundry Malleable Bessemer and Bessemer Pig Iron, and is marketed almost entirely in Ontario. The raw materials used are coke, iron ores and limestone. The coke is obtained from the Connellsville district in Pa., and is brought in by rail. The iron ores are brought in by vessel from Canadian and United States ports on Lake Superior and also Lake Michigan. The limestone is obtained from the company's own quarry, which is about 130 acres in extent, situated about three miles from the furnace. This material is brought to the furnace by scows in the summer and by teams in the winter.[8]

On the eastern seaboard of the Dominion are situated the works of the Dominion Iron and Steel Co., begun in 1899. Coal and limestone are found comparatively near at hand, the farthest afield mine from which the coal supply is drawn being 25 miles distant, while the nearest one is 6 miles. Nearly all the iron ore at present used is brought from mines owned by the company on Great Belle Island in Conception Bay, Newfoundland, some 400 miles from Sydney. This mine is estimated to contain 28 million tons of available ore, besides areas under the sea, which are believed to be very extensive. Analyses of the ore show it to contain 50 per cent. of iron, little sulphur, but rather too much silica, aluminium, and phosphorus. The result is a pig iron too high in phosphorus, but during the subsequent conversion of the pig into steel in open-hearth furnaces, this impurity is eliminated, and a fine quality of steel produced. For the best kind of pig iron, it is necessary to mix other ores with it, and for this purpose Cuban, Spanish, and Swedish ores are used, the result being a low phosphorus pig. Indications of large deposits of high-grade ores have been found both in Nova Scotia and Cape Breton, which, when fully developed, will in a great measure replace the foreign ores.

Limestone is obtained from the company's quarries at the Bras d'Or Lakes, about 85 miles, by water, from the works. It is a stone of good quality, and is found in large deposits; it acts well with the Newfoundland ore and the Cape Breton coke.[8] The works contain four blast-furnaces capable of yielding 1,000 tons of pig iron per day; the furnace gases are utilized also to the utmost, being used to heat the blast and also to raise steam. The iron produced is partly cast into pigs and in part conveyed in a molten condition direct to the open-hearth furnaces, where it is converted into steel. Of these there are 10 in number of the H. H. Campbell type of tilting basic open-hearth furnaces, having a capacity of 50 tons each. A very complete arrangement of testing the steel at intervals is in vogue, and of stamping each ingot with special marks so that the consumer can ascertain from the company at any time every particular regarding the analysis and making of the piece.

The gases produced in the coke ovens are used in the open-hearth furnaces, the other bye-products, namely, coal-tar and ammonia, being also collected. The ammonia is converted into sulphate of ammonium by neutralizing it with sulphuric acid—which can be obtained from the pyrites separated from the coal in the preliminary grinding and washing processes to which it is subjected—and is principally exported to the United States, the West Indies, and Glasgow.

Canadian-made steel is largely exported to the United States from where it returns to this country in the form of rails and other finished products; but it is intended that this feature of the steel industry will shortly be transferred to Canadian terri-

(4) Dominion bounty on pig iron, 3 dols. per ton produced. Ontario bounty, 1 dol. per ton on pig iron produced from Ontario ores, and 50 cents on ores not obtained in the province; the rate of 1 dol. to be only paid up to 25,000 tons. Bounty is at present largely reduced, owing to increased production.

(5) In a letter from Mr. T. W. Gibson, Director of the Ontario Bureau of Mines, the following figures are given for 1903:

Pig Iron produced in Ontario		87,004	tons.
Steel	" "	15.229	"
Pig Iron	" Canada	265,418	"
Steel	" "	232,641	"

(6) Dominion bounty on steel, 3 dols. per ton; 2 dols. per ton on steel from foreign ores.

(7) Letter from Mr. J. A. Currie.

(8) Letter from Mr. A. C. Adams, Midland.

(8) The daily shipment is 1,500 tons.

tory. Sydney is extremely well situated as a seaport, being nearer to England than is New York, and, strange as it may appear, to the ports of South America and South Africa.[9] As far as geographical position is concerned, therefore, Sydney possesses many advantages, while the masterly and liberal way in which the iron and steel industry has been organized and developed points to a bright future for it in Canada.[10]

A new plant has been erected near North Sydney by the Nova Scotia Steel Co., who have at present works at Ferrona, with a limited supply of ore near at hand. Hence they import largely from Newfoundland. Their steel works are at present at New Glasgow, but a new plant is under construction at Sydney (1903), Their output, which is sold almost exclusively in Canada, approximates 100 tons of pig-iron per day and the same amount of steel.[10] *bis.*

Copper.

The production of refined copper can hardly be classed among the chemical industries of the Dominion, as practically only the first stage in its extraction of the metal is reached, namely, the making of copper matte, which is exported to the United States to be refined. As will be seen below, however, the refining of this metal is now being carried on in British Columbia.

Copper ores occur in great abundance, and constitute one of the most important mineral resources of the country. These are distributed over large tracts in Ontario, Quebec, Nova Scotia, and New Brunswick. The deposits consist of native copper and sulphides, the former confined principally to the Lake Superior region, the latter being more widely diffused, but notably in the Sudbury region, Ontario, where it occurs with nickel. The production of copper, other than the native copper near Lake Superior, is dependent for the most part on that of this latter metal.

The British Columbia Copper Co. is now turning out about seven million (7,000,000) pounds of copper a year and has an excellent converter plant at its mine. This copper is produced at a cost of about 9½ cents a pound. The product from the converter is blister copper and is sent to New York to the Nicholls Chemical Co. to be refined. The Montreal & Boston Copper Co. is now producing about 3,000,000 pounds of copper and is selling its matte to the British Columbia Co. The Granby Co. is producing about 15,000,000 pounds of copper a year, at a cost of around 9½ cents, laid down in New York.[11]

Some idea of the advances made in the production of copper matte may be had from the fact that in 1893 the production amounted to 8,000,000 pounds, while 1903 showed an output of 43,000,000 pounds.[11] *bis.*

Mr. A. P. Turner, of the Canadian Copper Company at Copper Cliff, Ontario, has furnished some interesting particulars regarding the production of copper as carried on at the works of this company, which controls about 20,000 acres of mineral lands in the nickel district extending from Garson Township in the District of Nipissing, south-west to Drury Township in the District of Algoma, in the Province of Ontario. The company began operations in 1887, and at present is mining and smelting about 700 tons of ore per day. The ore is a mixture of nickeliferous pyrrhotite, pentlandite, chalcopyrite and diorite: the nickel in this pyrrhotite replaces about 2 to 4 per cent. of the iron. Copper occurs in the form of copper pyrites. The ore contains no arsenic or antimony, but small traces of gold, platinum and palladium. An average assay of the different mines is about 2 per cent. copper and 4 per cent. nickel.

The company has designed and just finished at Copper Cliff, a new smelting and power plant, in which are combined the latest and best improvements in the smelting world. There are larger plants, but it is doubtful if there is another in which are assembled so many up-to-date conveniences for every part of the work.

Nickel.

The first discovery of nickeliferous deposits was made in 1883 near Sudbury, in the district of Algoma, Ontario. Previous to the discovery of nickel in this country, the French colony at New Caledonia practically contributed the world's supply of the metal, though supplemented, in a small degree, by the Gap mine in Pennsylvania and by a few isolated mines in Norway and Hungary. Professor Coleman[12] states that the Sudbury ores consist of a mixture of pyrrhotite (magnetic pyrites) and copper pyrites, and in this resemble the gold ores of Rossland. In order to obtain the metal the ore is smelted into a matte, containing from 12 to 20 per cent. of nickel and about the same amount of copper, is "Bessemerized" into a regulus containing about 40 per cent. of nickel and is shipped to Clydach in Wales, where its nickel content is extracted and refined by the process invented by Dr. Ludwig Mond, F.R.S., and which bears his name. The chemical principle on which this process is based is the formation, at temperatures of about 50° C., of a volatile colourless, gaseous compound of nickel and carbon monoxide, of composition Ni4CO, which, on being subjected to a temperature of 180° C., decomposes, leaving metallic nickel and liberating the carbon monoxide. The product thus obtained contains between 99.4 and 99.8 per cent. of nickel. The Mond Nickel Company is the only company refining nickel within the British Empire, and it is interesting to note that at the recent St. Louis Exhibition Dr. Mond was awarded the gold medal for his process, the company receiving a similar honour struck in silver.[13]

What is known as the Orford or alkaline sulphide process of refining nickel is the one by which the Canadian Copper Co.'s mattes are treated at Constable Hook, N.J., by the Orford Copper Co. As this company (now forming part of the International Nickel Company) is the chief producer, the bulk of the nickel ores of Ontario are refined by the Orford process. An electrolytic refinery erected by the Canadian Copper Co. at Cleveland, Ohio, was operated for a short time only, but shut down in 1902.[14]

The Orford Copper Co. is also producing *palladium.* This metal belongs to the platinum group, and is found associated with it. The Sudbury ores are said to contain from one-tenth of an ounce to one ounce per ton, and Dr. Joseph Wharton, in an article recently published[14] *bis*, prophesies a future production of palladium from these deposits. Palladium is an interesting metal, not only from the chemist's point of view, but also from an industrial one, as its physical properties, hardness, etc., and the difficulty with which it is attacked and tarnished at atmospheric temperatures, render it eminently suitable for replacing silver as a reflecting surface on optical instruments, for plating the finely cut scales on instruments of precision and for alloys.

Aluminium.

The extraction and refining of aluminium has in recent years, owing to the advent of electricity developed from cheap water power, become an important industry. At Shawinigan Falls, Quebec, are situated the Canadian works of the Northern Aluminium Co., a sub-company of the Pittsburg Reduction Co., which

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	Miles.
(9) Sydney Harbour to Liverpool (*via* South of Ireland)	2,307
New York Harbour to Liverpool	3,110
Sydney Harbour to Pernambuco	3,567
New York Harbour to Pernambuco	3,696
Sydney Harbour to Cape Town	6,467
New York Harbour to Cape Town	6,787

These figures were supplied to me by Mr. Watson Griffin, who obtained them from Captain W. H. Smith, R.N.R., Halifax. The distances from New York were compiled by the United States Commission of Navigation.

(10) Mr. Watson Griffin, who kindly supplied me with material from which the above description of the Sydney operations was written, mentioned also that a leading Scottish iron and steel magnate told him that, everything considered, Sydney, in regard to raw materials, nearness to the market, and the excellent equipment it possessed, would be the finest steel manufactory in the world. Watson Griffin, "Dominion Steel and Coal Co., Sydney;" Montreal, 1902. Watson Griffin, "The Front Door of Canada;" Montreal, 1899.

(10 *bis.*) The production of pig iron in 1903 amounted to 265,418 tons, as compared to 47,000 tons in 1893, while the proportion of the home product to the total consumption of pig was 76% in 1903 as compared with 42% in 1893.

(11) Letter from Mr. F. P. Clappison.

(11 *bis.*) Statistical Year Book, 1903.

(12) 8th. Report of Bureau of Mines, Ontario, page 106.

(13) A full account of the Mond Nickel Process will be found in the 8th Report, Bureau of Mines, Ontario.

(14) Letter from Mr. T. W. Gibson, Director of the Bureau of Mines, Ont.

(14 *bis.*) "Hardware and Metal," Dec. 3rd, 1904.

also has two large factories at Niagara Falls, N.Y. The raw material, bauxite, is obtained from Alabama, Arkansas and Georgia, in the United States. The process employed is the Hall[14] process, and is a combined electrolytic and electric furnace one. The native aluminium hydroxide is first purified by mixing with sufficient carbon to reduce all impurities in it to the metallic state, the resulting iron, mixed with titanium and silicon, forming a slag after melting the mass in an electric furnace. An alternating current of low voltage is used, and the purified alumina separates out above the slag in an almost chemically pure condition. The alumina thus purified is then electrolyzed in a bath containing cryolite at a temperature of from 850° to 900° C. The action of the current sets free aluminium and oxygen, the latter uniting with the carbon anodes to form carbonic oxide. The metal is run into rough ingots weighing 20 pounds each, and is stated to contain, on an average, 99.5 per cent of aluminium.[15] The principal portion of the product at Shawinigan is shipped in the form of ingots, although there is in addition a wire mill where aluminium wire and cable for electrical conductors are made.

The production of the Quebec works is probably 9,500 pounds per day, the value in 1902 being approximately $1,043,250.[16] It may safely be said that the three works of this company between them produce one-half of the world's supply.

Lead and Silver.

These metals are derived principally from the mines of British Columbia, but there are also deposits of galena along the shores of Lake Superior, the ore from which is sent to Niagara Falls, N.Y., for reduction. The British Columbia ore is a high grade one, carrying from 200 to 300 oz. of silver to the ton, and is mostly smelted at Butte and St. Helena, Montana. No refinery for lead (on a large scale) has yet been started in Canada, though at Trail, in British Columbia, the Canadian Smelting Works have recently begun to produce commercial lead, stated to be of 99.9 per cent. purity,[17] by means of the Bett's process, which is an electrolytic one.

The Hall Mining and Smelting Works, whose Canadian headquarters are at Nelson, British Columbia, are smelting lead ores which are obtained in the Slocan and Kootenay Lakes. They employ blast furnaces, a considerable portion of the ore being first roasted in hand or mechanical furnaces and the product of the latter briquetted. The principal markets for the pig-lead are the Orient, England, and Canada, though the home market is somewhat handicapped by the present arrangement of duties, which allows the importation of foreign corroded lead at a lower rate than that imposed on pig-lead. With a revisal of the duties a greatly increased development and revival of the lead and smelting industries is anticipated.[18]

In 1894 the amount of silver exported, in ores, concentrates, or otherwise, was 629,655 oz., while in 1901 the quantity had risen to over 4,000,000 oz.[19] Despite these figures, the *Monetary Times*, Toronto, of date Jan. 16, 1903, says, "The silver-lead production of British Columbia is severely handicapped by the adverse competition of the United States, the European and Mexican products. The tariff is unfavourable, a higher one would be quite beneficial to the industry."

During the session of 1903 the Parliament of Canada provided for the payment of a bounty of 75c. per hundred pounds on lead smelted in Canada from Canadian ores, the maximum amount of bounty payable in any one year being $500,000, and the rate subject to proportionate reduction when the standard price of pig lead in London, England, exceeds £12 10s. per ton of 2,240 lbs. This provision has led to the revival of silver-lead mining in British Columbia. A small plant for smelting lead has been erected at Bannockburn, Ont., to be used on the non-argentiferious ores of that locality[19 bis].

(15) Dr. J. W. Richards in "Electro-Chemical Industry," Oct., 1902.
(16) *Ibid.* (average value of product is 31 cents per pound).
(17) Canadian Mining Rev., March, 1903.
(18) Letter from the Business Manager, Hall Mining and Smelting Co., Nelson, B.C.
(19) Statistical Year Book of Canada, 1901.

Arsenic.

A not unimportant metal found in considerable quantities in Ontario is arsenic; the chief form in which it occurs is arsenical pyrites (mispickel), which also contains gold. Its manufacture was begun by the Canadian Goldfields, Ltd., at their Deloro Mine, Hastings County, Ontario, in 1899. Attempts had been made, extending over the previous 20 years or so, to extract the gold from the ore found there, and, after the mine had experienced some vicissitudes, the present company acquired it and obtained the rights (1896) for Ontario to the Sulman-Tweed patents (bromo-cyanide process), working it with only a modified degree of success for a couple of years, when the installation of improved machinery and the adoption of a combination of amalgamation and leaching with bromo-cyanide resulted in the recovery of arsenic from the mispickel concentrates. To accomplish this the concentrates are heated to a high temperature in specially constructed cylindrical revolving calciners, and the resulting impure arsenious oxide evolved is condensed in hermetically sealed brick chambers[20]. The crude arsenic is refined by sublimation, and contains from 99.6 to 100 per cent. arsenious oxide, the main impurity being silica in a finely divided condition[21]. It is exported chiefly to the United States, where it is used for making "Paris Green," etc. The output has increased from 113,477 lbs. in 1899 to 1,347,000 lbs. in 1901[20]. In time and with proper development Ontario should be able to supply the entire demand for arsenic on the continent of America.

Auriferous mispickel mines are being opened up at Lake Temagami, and concentrating works are in course of erection. The process of refining the arsenic will be an electrical one. The ores of the Haileybury region, not far distant, discovered last year, contain 60 or 65 per cent. of arsenic, but are more valuable for their other constituents, including silver, cobalt and nickel[19 bis].

Antimony.

This metal might almost be said to occupy the position of a bye-product in the extraction of gold. At Rawdon, in Nova Scotia, the ore (stibnite) is auriferous, and from 1898 to 1901 no refined antimony was produced, the stibnite being mined for the sake of its more precious contents[22]. It is also found in Quebec, and recent reports indicate deposits of ore in several localities of Ontario and British Columbia. The output in 1891 had fallen to $60. In 1902 the refining of the metal was renewed.

Gold.

Gold is mined to a small extent in Ontario, in Nova Scotia and Quebec. Gold deposits are also found in the Kootenay district, B.C., in Cariboo, B.C., and in the Yukon. In the Rossland district the ore is a cupriferous pyrrhotite under a diorite cap, and from Trail on the Columbia River, where the ore is smelted, the gold-copper matte produced is shipped to Montana for refining purposes. There is also a smelter at Nelson for the ore of the Hall mine. The Yukon territory covers in a general way the district north of Cariboo, south of the Arctic Ocean, and lying between the Mackenzie River and the Alaska-Canada boundary. Gold has been known to exist there since 1864, and has been worked intermittently since 1873. Forty Mile River, a tributary of the Yukon, was discovered to carry coarse gold in 1886, and ten years later, what is known as the Klondike, was found to

(19 *bis.*) Letter from Mr. T. W. Gibson.
(20) C. Kirkegaard, in Eng. and Mining J., Jan. 31, 1903.
(21) Bureau of Mines Report, Ontario, 1901.
(22) Assays of two ores give, according to the Nova Scotia Mines Report, 1901:—

	I.	II.
	Per Cen	Per Cent.
Antimony	45.75	18·21
Gold (oz. per ton)	2·48	0·23
Silver (oz. per ton)	0·10	0·13

contain gold also. It was first discovered on Bonanza and Eldorado creeks[23]: the news of this discovery spread far and wide, and active prospecting was the result. There are about 1,400 miles of Canadian Yukon streams, on all of which gold can be found. Mr. Ogilvie, former Canadian commissioner in the Yukon, estimates that an area of 125,000 square miles is gold bearing[24]. The former difficulties of reaching the Yukon have now been overcome; a telegraph line has also been laid by the Canadian Government from Skagway, on the coast to Dawson. The gold is found and worked in the gravel deposits of the valleys and on their adjacent slopes, and it has been estimated that gold to the value of 95,000,000 dols. will be produced from these deposits in the next few years[25].

The gold fields of Nova Scotia occupy the entire Atlantic coast line, and contain gold in combination with sulphides and arsenides of iron, but mostly in the free state. The following table will best convey the output of gold from Canada and its distribution[26]:—

——	1892.	1901.
	Dols.	Dols.
Ontario	7,118	243,022
Saskatchewan, N.W.T.	98,006	15,000
Yukon	....	12,500,000 [27]
Quebec	12,987	3,000
British Columbia	399,525	5,596,700
Nova Scotia	389,965	604,500
Total	907,601	24,463,222

The gold production for the Yukon in 1902 was 12,018,561 dols.; according to the United States Mints it was 14,525,275[28].

The total output of gold in Canada in the years 1893, 1900 and 1903 amounted respectively to $976,603, $27,908,153, and $18,834,373. The figures for 1904 are not yet available.

(23) "Official Guide to the Klondike," by William Ogilvie.

(24) *Ibid.*

(25) Report of the Canadian Commission in the Yukon.

(26) Statistical Year Books, 1892-1902.

(27) Letters from Mr. B. E. Walker, General Manager, the Canadian Bank of Commerce.

(28) Letter from Hon. Clifford Sifton, Minister of Interior, Ottawa.

Appendix I.

The Iron Ores of Canada.

Nova Scotia.—Magnetites in enormous quantities at Nictaux, in Annapolis County, at Whyhogomah, in Inverness County.

Appendix II.

Metallic Production of Canada, 1892-1903.

Metals.	Value, 1892.	Value, 1897.	Value, 1901.	Value, 1902.	Value, 1903. [86]
Pig Iron	637,421 dols.	53,796 tons.	1,212,113 dols. [85]	1,043,007 dols.	707,838 dols.
Copper in Mattes	818,580 " [84]	1,501,660 dols. [84]	6,096,581 " [85]	4,511,383 "	5,728,261 "
Nickel in Mattes	1,399,176 " [84]	1,399,179 "	4,594,523 " [84]	5,025,903 "	5,002,204 "
Arsenic	1,000 "	.....	41,676 " [85]	48,000 "	15,420 "
Gold	907,601 "	6,190,000 "	24,128,503 " [85]	21,336,667 "	18,834,490 "
Silver	193,441 "	2,613,173 "	3,265,354 " [85]	2,238,351 "	1,170,779 "
Aluminium	.....	.....	1,000,000 "	1,643,250 "	.....
Lead	49,422 "	1,396,853 "	2,249,387 " [85]	934,095 "	762,660 "

[84] Value of metal if refined.

[85] Statistical Year Book, 1903.

[86] Subject to revision. Mr. T. W. Gibson states that the total pig iron and steel produced in Ontario in 1903 amounted to 87,004 tons and 15,229 tons respectively; the whole of Canada yielded, during the same period, 265,418 tons of pig iron and 232,641 tons of steel.

Appendix III. [89]

Iron and Steel Production.

Company.	Plant at	Built.	Source of Ore.	Employees, 1902.	Output in Tons.				Capacity of Furnaces in Tons per Day.		Capitalisation.
					Pig Iron.			Steel.			
					1892.	1901.	1902.	1901.	1892.	1902.	
											Dols.
Canada Iron Furnace Co.	Midland, Ont.	1899	Ontario	..	..	18,948	..	..	..	..	1,000,000
	Radnor, Que.	.	Quebec	..	5,574	31,159	..	..	40	..	..
	Londonderry, N.S.	1887	N.S.	[87]	28,052	[87]	[87]	[87]	40,000 per ann.	150	..
Hamilton Steel and Iron Co.	Hamilton, Ont.	1896	Ontario and U.S.A.	1,000	[88]	51,701	.	9,473	[88]	180	1,500,000
Nova Scotia Steel and Iron Co.	New Glasgow, N.S.	..	N.S.	965	29,502	28,407	..	23,916	100	100 pig, 100 steel.	5,000,000
Deseronto Iron Co.	Deseronto, Ont.	..	U.S.A.	..	..	13,701	..	..	..	..	..
Dominion Steel and Coal Co.	Sydney, N.S.	1901	Newfoundland	6,000	[88]	27,643	191,259	86,424 (1902)	[88]	1,000 pig, 800 steel.	33,000,000
John MacDougall and Co.	Drummondville, Que.	..	Quebec	..	..	793	..	..	6	..	..
Cramp Ontario Steel Co.	Collingwood, Ont.	1900	Ontario and foreign	[88]	..	..	..	..	.	200,000 per ann.	..
Lake Superior Power Co.	Saulte Ste. Marie.	1901	Ontario	500	..	..	..	..	[88]	..	117,000,000

[87] Not in operation, due to repairs being made.

[88] Not in operation.

[89] Prepared by Mr. F. P. Clappison in 1903, largely from private letters.

Specular and red haematite at Nictaux, Stewiacke, Pictou, Antigonish, Guysboro, East Bay, and many other points. Limonite, specular, spathic clay ironstone and haematite at Londonderry. Mineral fuel and fluxes are in close proximity throughout the whole district[79].

Cape Breton.—Extensive deposits of brown haematite, magnetite, and spathic ores lying adjacent to the great coalfields[80].

New Brunswick.—Magnetite and bog ores. Coalfields at Grand Lake and hardwood throughout the Province.

Province of Quebec.—Very extensive deposits of bog and lake ores, extending from the Province of Ontario to Gaspe. Magnetite deposits especially good at Sherbrooke, Leeds, Sutton, St. Jerome, and in Pontiac County. Hardwood and limestone abundant. Deposits of chrome-ironstone found in 1895 in Coleraine. The "Eastern Townships" obtain iron by dredging in the Lac-a-la-Tortue. Magnetites at Hull, near Ottawa[81].

(79) Nova Scotia Report of Mines, 1901.
(80) Report of Geological Survey.
(81) Mines and Minerals of Quebec; Department of Mines.

Ontario.—Vast deposits from the Ottawa Valley to head of Lake Superior, comprising magnetite, red haematite, limonite, specular, and occasional bog ores. The Helen Mine, at Michipicoten, is said to be one of the richest in the world. There are also extensive forests of hardwood, especially suited for the production of charcoal, and fluxes in abundance[82].

Manitoba.—Magnetite, haematite, and bog ore on Lake Winnipeg. Hardwood in abundance[83].

British Columbia.—Magnetic ores at Texada Island and Cherry Tree Bluff. Coal and wood in plenty. Collieries at Nanaimo (Naval coaling station for H. M.'s ships), Wellington, and Comox. A recent discovery of large deposits of magnetite has been reported in the Boundary Region, which at present mainly finds a use as a flux[83].

(82) Bureau of Mines Report, Ontario, 1901.
(83) Geological Survey of Canada, 11th. Annual Report.

THE MARKETS OF WESTERN CANADA

$100,000,000 a Year is being Spent for Manufactured Goods in Manitoba and the Territories. Where does the Eastern Manufacturer come in?

Perhaps the best way to impress Eastern Canadian manufacturers with the importance of the North-West as a market for their goods is to quote at the outset some figures which have just been published by the Government, giving the value of imports entered for consumption in Manitoba, the Territories and British Columbia during the last fiscal year. A comparison with year 1901, which was the census year, will also show at what rate the consumption of the North-West is increasing.

The table which follows shows the imports by customs:—

Districts for the years named.	1901.	1904.
Grand Forks	$ 306,276	$ 116,325
Kaslo	137,543	49,630
Nanaimo	374,906	357,742
Nelson	801,545	709,710
New Westminster	615,258	970,585
Rossland	673,423	600,843
Vancouver	4,079,328	5,780,114
Victoria	3,817,515	2,931,578
Total British Columbia	$10,805,794	$11,516,527
Brandon	271,910	991,236
Winnipeg	5,125,262	13,243,842
Total Manitoba	$5,397,172	$14,235,078
Calgary	$1,000,246	$ 1,571,407
Lethbridge	442,823	1,218,314
Regina	.....	2,110,728
Dawson	1,629,237	1,372,407
White Horse	180,856	487,863
Yukon Frontier	981,144	.....
Total Territories	$4,234,306	$6,760,719
Grand Total Western Canada	$20,437,202	$32,512,324

This table thus shows that Western Canada is now importing in the neighborhood of thirty-three million dollars' worth of goods annually, and that this vast influx of foreign products is increasing at the rate of over fifty per cent. in four years. But it shows more. It shows that the imports of foreign goods is not increasing materially at the ports of entry on the Pacific Coast, but mainly in the interior districts, from Winnipeg to the Rockies, which are more accessible to the manufacturers of Eastern Canada.

Of course the growth of this part of the country has been so phenomenal in recent years that its trade with Eastern Canada has increased in even greater proportions than its foreign import trade. Still it is quite evident that a large proportion of the goods shipped from the east over the railways were foreign goods entered at eastern ports. The moral suggested by the ensemble of the table is that the Canadian manufacturer has been neglecting some most valuable opportunities, to the great advantage of his competitor south of the line. The great increases in imports entered for consumption in the districts of Winnipeg, Brandon, Regina, Lethbridge and Calgary clearly show from what side the north-western market has been invaded.

With fifty thousand settlers crossing the line annually into Canada it is not strange that the opportunities of the United States producer to increase his trade in this country should have been large. New settlers naturally turn to their former homes for the things to which they have been used. Many lines of manufactures have been built up in the United States with a view to meeting the special needs of a prairie country such as extends both south and north of the line. It is the province of the eastern Canadian manufacturer to study these needs in turn, so that the man who farms in Canada shall be supplied with goods made in Canada. With increased facilities for transportation from east to west, with lowering freight rates, with a more abundant labor supply and rapidly improving means of financing his enterprise, there is no reason why he should allow this valuable field to remain in the hands of foreign competitors.

The Western Canadian farmer is perhaps the best customer in the world. He is not only increasing in numbers by hundreds of thousands annually, but each is adding to his wealth with equal rapidity. Even the despised Doukhobors are now buying agricultural implements by the car load. It is essentially a characteristic of Western Canadian men and communities that they like to do things promptly, on a large and generous scale. The manufacturer who wants to keep up with their progress will have to keep his eyes open. Within the last few months the construc-

tion of new lines of railways in Saskatchewan and the other territories has caused innumerable small villages to spring up. The construction of the transcontinental will give immense opportunities for business. A merchant of Pincher Creek, which boasts four hundred inhabitants, assured the writer that in one year he did over two hundred thousand dollars worth of business, during the construction of the Crow's Nest line.

The needs of the North-West are many, and so are its resources. With great spruce and poplar forests, with cheap coal in Alberta, with petroleum, natural gas and cheaper water power in other sections, with wheat fields and cattle ranches, and with important mineral deposits, it can look forward to a vast industrial development of its own. But that will not happen, however, on any extensive scale so long as land is cheap and agriculture correspondingly profitable. The man who can raise $5,000 worth of wheat a year on his farm is not likely to send his family to work in the shops. Hence, the outside manufacturer's present opportunity.

The manufactured goods imported into the North-West comprise nearly every branch of industry. An idea will best be formed by giving some of the most important articles that were entered in the districts of Winnipeg and Calgary last year:—

Articles.	Winnipeg.	Calgary.
Ale, beer and porter	$ 38,559	$ 1,229
Brass and manufactures of	37,375	2,762
Carriages of all kinds	438,540	17,879
Biscuits, etc	66,223	7,758
Bricks, tiles, etc	74,349	9,927
Cement	83,856	389
Cash registers	31,717	351
Cocoa preparations	28,709	225
Curtains, made up	27,361	259
Cotton, manufacturers of	507,006	11,046
Dressing, harness and leather	94,612	39
Drugs and Chemicals	133,224	5,316
Electric apparatus	26,764	6,279
Fancy goods	105,960	2,289
Flax, hemp, jute, etc	165,060	6,988
Furniture	72,778	3,492
Glassware	176,661	7,368
Gloves and mitts	59,621	1,101
Explosives	161,031	5,651
Rubber goods	50,688	1,350
Hats and caps	70,833	3,751
Iron and steel (dutiable)	3,198,296	329,305
Iron and steel (free)	176,917	32,794
Leather and manufactures	101,921	19,983
Metal manufactures	81,909	3,142
Oils, N.E.S	192,722	3,959
Oiled cloths, etc	114,883	2,648
Paints and colours	35,723	3,762
Paper manufactures	107,506	10,760
Pickles	29,421	933
Ribbons	37,605	2,784
Silks	186,504	4,963
Manufactures of wood	369,430	11,787
Manufactures of wool	708,832	32,399
Rough lumber (free)	143,551	15,700

This partial list will give an idea of the varied market which the North-West affords, but its extent must be judged from the first table given.

By a reference to this latter it will be seen with what rapidity Winnipeg has been forging ahead of all competitors as the distributing centre of the North-West. Yet the example of Calgary shows a general disposition of even the smaller towns to import directly, and it pays the live manufacturer to look after them.

As to establishing connections in the West, Winnipeg alone now boasts over eighty manufacturers' agents, so that it should be an easy matter to secure representation.

It may be interesting to eastern manufacturers to note the trend of western industrial development as exemplified in Winnipeg. Among other industries the last city directory shows seven brick yards, two casket factories, one hundred and fifty contractors and builders, three flour mills, nine founrdys and machine shops, manufacturing druggists, manufacturers of clothing, pickles and other food products. But it is the building industry and in the manufacture of the various food resources of the West that the best opportunities are now afforded. The West is buying today nearly a hundred million dollars' worth of manufactured products from the outside, and its demands will increase with every year.

SCIENTIFIC NOTES.

Hydrating Lime.

A unique plant is now in process of construction in Winnipeg, which has for its primary object the preservation of lime. Under ordinary circumstances lime deteriorates very rapidly; through the action of the air its valuable properties are quickly dissipated. In dull seasons the kilns must be closed down entirely, for such a thing as laying up a store upon which to draw for future needs has hitherto been impracticable. It is now proposed to overcome this difficulty by hydrating the lime. The first step in the process is to reduce the lime to powder by means of a crusher. It is then elevated, weighed, and lowered into the hydrating machine a ton at a time. Here it is sprinkled with water and then turned over and over by a system of revolving plows. When thoroughly dry it is again elevated to a screen, where all impurities are removed, after which all that remains to be done is to put it in bags.

Lime thus treated, it is said, can easily be kept through an entire building season, and work at the kilns need suffer no interruption. When delivered to the builder the slacking has already been done, so that the cumbersome slacking boxes are no longer necessary. A plaster mixer which thoroughly mixes the hydrated lime with dry sand before bagging, does away with the laborious hand processes now employed by the plasterer, who simply needs to wet the material to use it. Another novel feature of the Winnipeg plant is an electric hair-picking machine.

The Typewriter Telegraph.

What is generally regarded as the most important invention in the world of telegraphy since the introduction of the quadruplex is the typewriter telegraph, recently perfected by John C. Barclay, assistant general manager and electrical engineer of the Western Union Telegraph Co. Scores of inventors have been working on this idea for years, but Barclay's machine is the first one to be pronounced a success. A detailed description of the device is withheld until patent rights abroad have been secured. The apparatus, however, is understood to be extremely simple in its operation. Its speed is limited only to the speed at which a person can manipulate the keys of a typewriter. One of the machines is in use in the Buffalo-New York circuit, and with it an operator recently transmitted 324 messages in one hour—this too without any attempt at speeding. At the receiving end the messages are printed in page form on ordinary telegraph blanks, which are fed to the receiver as required.

It would be difficult to foretell the far-reaching results that may follow from improvements on the Barclay system. By means of a retroacting appliance it is suggested that the operator might see exactly how the characters are being printed in the various points to which his message is being sent, thus ensuring absolute accuracy in transmission. By a merging with the linotype machine it is conceivable that an operator in New York could set the news despatches into type in a dozen newspaper offices simultaneously. Not the least of its advantages is the economy of operation which it permits of, one man doing the work of four. With the cost of telegraphing reduced in proportion it seems not unlikely that the system of commercial correspondence may be revolutionized, the telegram taking the place very largely of the ordinary business letter.

Transportation Department

DEMURRAGE, CAR RENTAL OR CAR STORAGE.

(*Continued*).

The discussion of demurrage, car rental or car storage charges is continued from the February number. Canadian Freight Association car service rules, Nos. 1 to 11, were dealt with in the last issue.

Rule No. 12 reads as follows:—

> Cars held to remedy improper, unsafe or excessive loading, or for surrender of Bills of Lading, or by reason of being consigned to "order," or insufficient address of consignee, or waiting instructions as to disposition by shipper, or consignee, will be subject to car rental.

Correcting Loads.

Dealing with delay arising from the remedying of improper, unsafe or excessive loading, if the loading were carried on under the supervision of the railway or in a manner as directed or approved by the railway, cars should not be subject to demurrage charges. Where the minimum weight and maximum loading capacity of cars are the same, as sometimes they are, or closely approximate each other, in these cases (example, rough material, like stone), it is often difficult for a shipper to fit the loading to the requirements of the railway. As his efforts to do so originate with the necessity of furnishing the railway with a heavy or maximum load for its equipment, reasonable time should be allowed for correcting the load if the railways judge it excessive.

Refused Freight.

Where carloads are received at destination without the address of the consignee or if the consignee declines to accept the freight, it should be the duty of the railway to take prompt and reasonable measures to notify the shipper, and sufficient time should be given the shipper in which to make arrangements for disposition. Some of the United States car service associations allow three days for this purpose. If the railway fails to advise the shipper, demurrage should not accrue until such time as notice is given.

Rules 13, 14 and 15 contain no objectionable features, and will not be subject to discussion here.

When Cars Placed.

> Rule 16. The placing of cars shall be considered to have been effected when such cars have been placed on the designated delivery tracks or sidings, or if such tracks or sidings contain cars belonging to the same consignee, and which have been detained over the limit of free time, at the time the R. R. Co. could have placed the cars had the condition of such tracks or sidings permitted. Consignees requiring cars placed on a designated track or siding and having more cars on hand or arriving than their facilities allow them to handle on said track or siding, must pay car service charges for all cars detained beyond the free time limit on that account, one shunt per day being considered reasonable service.
>
> (a) The time occupied by the Railway Company in placing cars will not be counted against the consignee unless the delay is caused by the consignee, as stated in this rule.

Delay in Placing.

Congestion of delivery sidings has already been discussed under rule 8. When delivery tracks have become overtaxed and cars are held in railway yard awaiting room to be placed, if consignee by unloading a number of cars makes room for others and so informs the railway, in the event of failure to promptly place such cars, consignee should be allowed the lost time, not only on the number of cars which could be placed, but on all others held by the railway. Delay in placing not only results in retarding the unloading of the particular number of cars which could be accommodated on the siding, but also to the same extent all other cars which are held for unloading by the consignee.

Stoppage in Transit.

> Rule 17. Cars billed to stop in transit at any point for inspection, custom entry, milling, cleaning, sacking, further loading, or change in load or destination (when such stop over is permitted by the R.R. Co. concerned) will be subject to car rental charges if detained beyond 48 hours after notice of arrival. If such shipments are transferred to other cars, car rental will continue on the car to which transfer is made, unless paid at the time by by the party at fault.

Where the detention of cars is under the control of consignee, as in the case of cars stopped for inspection, milling, cleaning, sacking, completion or change in load or destination, 48 hours seems to be a reasonable time allowance.

Customs Requirements.

But when shipments are held in transit for customs entry, sufficient time should be allowed to enable consignee after receipt of notice of arrival at customs entry port to forward entry papers and secure release from the Customs Department. There are many points where this is impossible within the period specified in the above rule.

Rule 18 is not subject to discussion.

Weighing Cars.

> Rule 19. Where cars are delayed or refused by consignees at destination on claim that freight charges are incorrect, or where car is re-weighed at their request, regular car service charges will be assessed and collected, provided no material correction in freight charges or weights is allowed by the freight department.
>
> (a) On all cars which are detained or held from delivery for any reason for which shipper or consignee is responsible, time will be counted from notice of arrival, whether such cars are in position on delivery tracks accessible for unloading or not.

Where cars are required to be re-weighed and the original weight is confirmed, it should not be permissible for the railway to charge demurrage for a greater length of time than would ordinarily be sufficient to shunt the car to the weigh scales and return it to the consignee. As the rule now reads, railway agents are instructed to assess demurrage for the actual time occupied in shunting, notwithstanding that this may involve considerable delay for which the railway itself might be responsible.

Where cars have not been weighed in transit, consignees should have the right to order such cars weighed if scales are provided at the point of destination, and no demurrage charges should be assessed for the additional time occupied by such weighing.

Rule 20 does not provoke discussion.

Complaints.

Rule 21. All complaints which may arise from non-conformity to any of these rules, or from neglect of, or discrimination in enforcing them, also all doubtful or complicated cases, involving any uncertainty as to the proper meaning or application of these rules, should be referred at once to the manager for decision.

Should the manager consider that the circumstances justify such course he will recommend the road concerned to cancel the charges or such portion of them as he may deem proper.

Disputes and Doubtful Cases.

It is implied here that difficulty may be experienced in determining the proper meaning or application of the rules, and in cases of dispute railway agents are instructed to refer at once to the manager for decision. It has been previously pointed out that the location of the car service manager makes it difficult to secure in all cases a ruling before the loading or unloading of the car could be completed. When disputes arise, it is unjust to invariably demand payment to the railway company of car service charges, pending a ruling from the manager. Some means should be provided for the protection of shippers and consignees where there is reasonable ground for dispute as to the proper interpretation or application of the rules.

Relief Suggested.

Some car service associations nave adopted a rule intended to afford a measure of relief in such cases, which reads after the following manner:—"With a view to preventing the presentation of bills for delay to cars, for which shippers or consignees probably should not be required to pay, agents are instructed to send promptly to the manager a statement of any case which they may consider doubtful, detailing the facts, and requesting instructions as to whether or not bills for such delays shall be presented." Pending instructions from the manager, the agents are not required to present the bills for collection.

In Rule 22 the public is not interested.

Agents Must Collect.

Rule 23. Agents will be held responsible for the collection of car rental under these rules with the same promptness and regularity as transportation charges.

(a) If the consignee or party taking delivery refuses to pay, the agent should prevent delivery until payment is made, the regular charge will continue to accrue until the car is unloaded.

In such cases the agent should promptly notify the manager, giving full particulars.

This Rule is related to No. 21, which has been dealt with above.

Rule 24 refers to railway material.

Refunds.

Rule 25. Refunds, in whole or part, may be recommended by the manager for the following reasons:—

(a) When the character of the property is such that it could not be loaded or unloaded within the free limit time.

(b) When cars are shipped from various points, or from one point on various dates, and accumulated or bunched en route by the railway company for convenience of train service, and offered for delivery faster than the property was ordered, and could be taken delivery of.

(c) When, for the convenience of the railway company, cars are not placed for unloading in the order in which they arrive.

(d) When cars are detained under special circumstances over which the owner of the property has no control. (Such claims must recite carefully all the facts, and claimants must be prepared to verify their statements by affidavit if necessary).

(e) On account of errors or omissions in railroad company's records or billing.

(f) Delays by customs, where such delays are unavoidable by consignees or shippers.

(g) Very wet or stormy weather; or extremely cold weather, rendering it unsafe to handle perishable freight.

(h) Other extraordinary circumstances which may justify special consideration.

Agents, however, must collect car rental according to the rules. Relief, or refund can only be had through the manager in the way prescribed.

Should Demurrage Be Collected?

The reasons enumerated for which the manager may recommend refund of demurrage appear in some cases to be sufficient to warrant the cancellation of the charge before collection.

When the character of property is such that it could not be loaded or unloaded within the free time limit, this fact would no doubt be patent to the railway agent. In such cases, if the car service manager were at all times accessible, it would seem reasonable that the railway agent should secure a waiver of demurrage in the same way as is authorized where loading or unloading is prevented by weather conditions.

Bunching.

The bunching of cars en route and in terminals by railways is one of the most fertile causes of objection to car demurrage. Its effects are felt more particularly by large shippers and receivers of freight. As a rule, large operators are provided with sufficient facilities to take care of all out-going and in-coming material, provided shipments are given reasonable despatch by the railways, and cars are placed promptly and regularly as ordered and required. Bunching of cars frequently arises from causes beyond the control of railways, such as accident, inclement weather conditions, etc. On the other hand, it is asserted that the responsibility is in a large measure accounted for by lack of motive power, equipment and other facilities. The statement has also been made that it is the practice of some railways where heavy movement of traffic has caused congestion at divisional terminals to take advantage of the absence of passenger trains on Sundays and divert all available motive power to the movement of freight traffic. In consequence, on Mondays the number of cars received at points of destination is far in excess of the normal movement and it is impossible under such circumstances for consignees to unload within the free period.

Delay in supplying cars as required, in lifting cars after they are loaded, lack of uniform movement, as well as irregularity in advising consignees of arrival of freight and in switching cars to delivery tracks, result in bunching cars at destination.

This phase of demurrage has been the subject of more comment by shippers and receivers than any other.

Reciprocal Demurrage.

It has been urged by many that the public should be protected by the application of what is termed "reciprocal" demurrage or delayage charges. This plan, which is already in operation in some of the United States, requires railways to furnish cars within a specified period, when ordered; if they fail, the shippers are authorized to collect a per diem charge for each day's delay. When cars are loaded, they are required to be lifted within a specified time; otherwise, the railway, on demand, is required to pay the shipper or consignee a per diem charge. In some cases railways are required to carry freight forward at an average number of miles per day, failing which, penalties are provided and are payable to the shippers or consignees. When cars have reached destination and are not promptly placed for unloading, per diem charges against the railway are provided.

Advantage of Reciprocal Demurrage.

The advocates of reciprocal demurrage point out that under the per diem rules, which govern the interchange of equipment between railways, the handling of cars subject to per diem charges, has been greatly accelerated. If this per diem charge, which is conceded by the railways to be a nominal one, has the effect of increasing the activity of freight cars in a marked degree, it is argued a reciprocal per diem or demurrage charge would bring about a prompt and regular movement of freight traffic which does not now exist, and, by reducing the possibility of bunching in transit or in terminals, would to a large extent remove this great cause for objection to demurrage rules.

Average Agreement.

Another plan suggested for overcoming this difficulty is known as the "average" agreement, which seems to have been devised for the purpose of securing to shippers and consignees a measure of equity in the application of demurrage rules where loading and unloading is frequently interrupted and delayed from causes which are not controllable.

Cleveland Arrangement.

In Cleveland the average arrangement is in effect, and may be entered into by any shipper or receiver who so desires. This arrangement provides for the settlement of car service charges on the basis of 30 hours, adjustment to be made monthly and an agreement to be made with each railway separately and only with railways delivering directly to or receiving directly from the party with whom agreement is made. Settlement under the average agreement is made at the end of each month. If any car is held over 15 days, the average arrangement does not apply, but demurrage is charged on same at the rate of $1.00 for each day after 15 days, regardless of what the average may be. This arrangement may be illustrated as follows:—

"A" loads or unloads 100 cars during a month, detaining them 110 days and 20 hours, or 2,660 hours. Average detention to one car is 26.6 hours, which is within the limit.

"A" loads or unloads 100 cars during the month, detaining same 125 days or 3,000 hours; average detention per car 30 hours, which is the even time allowance.

"A" loads or unloads 100 cars during the month, detaining them 160 days or 3840 hours; average detention to one car 38.4 hours. Detention in excess of average (30 hours), would be 840 hours or 35 days and "A" would be required to pay railway, on whose tracks cars were handled, $35.00 for detention.

Sundays and legal holidays are not included in computing detention.

Michigan Arrangement.

The average plan adopted by the Michigan Car Service Association allows two days for loading and unloading of all commodities, except coal, coke, lumber, etc., which are allowed three days. If a car of coal, coke, lumber, etc., is unloaded in one day, the consignee is allowed two days credit; if unloaded in two days, consignee is allowed one day credit. On other commodities, if car is unloaded in one day, consignee is given credit for one day. Accounts for average car service are closed on the last day of each month. Credits in one month are not permitted to off-set delays in another month, and no credits are authorized except for a full day. The average of each railway is handled independently of other railways.

In New England the average arrangement is authorized on the basis of 48 hours per car.

Advantage of Average.

The advantage of the "average" plan over the "reciprocal" demurrage arrangement is that it secures to shippers and consignees a reasonable time in which to load or unload freight, even when bunching occurs, without imposing upon the railways penalties for delays, against which such strong objections have been urged, This plan has been endorsed by a number of members of the Association. It is hoped that the Railway Commission will require the railways to adopt some similar arrangement.

Errors of Railways.

Dealing with the other reasons for which the manager is authorized to recommend refunds:—

When delays to cars result from errors or omissions for which the railway is responsible, it is unreasonable to collect demurrage charges from shippers or consignees.

Uncontrollable Delays.

When delays occur through circumstances over which the shippers or consignees have no control, if the facts are ascertainable before loading or unloading is completed, it should be possible to secure the consent of car service manager to the cancellation of demurrage, avoiding the necessity for filing claims.

Claims.

Rule 26. Claims for refunds should be forwarded direct to the manager promptly, accompanied by the freight receipted expense bill for the car rental, and statement in writing, setting forth the grounds on which the claim is made.

Complaint is made of the delay experienced in securing adjustment of claims when applications are made to the manager for refund of car storage collected. The railways should be required in all cases to make prompt adjustment. To accomplish this, a period might be specified within which time the settlement should be made.

Inclement Weather.

Rule 27. Car rental is not, under any circumstances, to be waived on account of weather, except as authorized by the manager, under the rules.

Applications for waival of car service on account of weather conditions should be sent in at the close of the day concerned, or not later than the following morning. The weather must be sufficiently severe, during the whole or greater part of the day, to prevent outdoor work before waiver is asked for.

Consignees and shippers are expected to attend to their office and financial requirements irrespective of weather conditions.

Waival of car service on account of weather or other conditions, after the free time has expired, should not be credited to the shipper or consignee, as the car should have been released within the free time limit.

Inclement weather conditions should not require investigation. When delay in loading or unloading results from this cause, the rules should permit the extension of the ordinary free time so as to give shippers and consignees the full period of suitable weather. The stipulation that the weather must be sufficiently severe during the greater part of the day to warrant the waiving of demurrage appears to be arbitrary when it is considered the free time allowance is in many instances already too short or barely sufficient. Waggon roads are frequently left in an impasssible condition for considerable periods after rain and snow storms, thus preventing the work of loading and unloading.

Rules 28 and 29 are not of interest to the public.

So far as the public is concerned, the question of revising the car service rules may confidently be left in the hands of the Board of Railway Commissioners. As the railways have evidenced a disposition to be governed by the decisions of the Board, it is not anticipated that any serious difficulties will be encountered in adjusting the matter.

With the adoption of rules which are fair and equitable alike to the shipping public and railways, objection to car demurrage will undoubtedly disappear, and instead of being looked upon as an unjust penalty, it will come to be regarded as a necessary regulation to facilitate the prompt loading and unloading of freight cars.

Labor Column

THE UNION LABEL.

rks out in Different Lines of Trade—Testimony of those who have suffered from its use.

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ence has been made elsewhere in this issue to the Union
l, and its annual bow to both Houses of Parliament.
revious occasions INDUSTRIAL CANADA has discussed in a
way the obnoxious features of this bill from the manu-
's point of view. In this issue it is proposed to discuss
stion more as applied to a few individual lines of trade,
quote from the experience of those who have adopted the
their factories.

The Union Label in the Cigar Trade.

Dominion Cigar Manufacturers' Association, representing
embership 85 per cent. of the cigar production of Canada,
ced upon record its strong disapproval of any legislation
ming to legalize the Union Label.

All cigars are marketed to the consumer under labels or brands, and as certain lines grow into public favor, the Trade Marks, as covered by the various label designs, become very valuable assets of the manufacturer, and are salable for large sums. If labor organizations are also permitted to register their particular emblem as a Trade Mark, and can then through the strength of their organization compel the manufacturer (as they oft-times do) to affix this label on each box of cigars, *the value of the Trade Mark becomes practically ruined as a salable asset.* All the labels on a package of cigars are equally part of the Trade Mark with the brand name, and except they can be delivered complete their sale is ruined. The manufacturer cannot sell the Union Label Trade Mark on his package with the rest of his Trade Mark, nor can he give any guarantee that the privilege of its use will be extended to the purchaser of his brand. Instances have occurred within the past few years where the presence of the Union Label has prevented the sale of a brand at a large figure.

Any effort to discard this emblem of Union labor has invariably been followed by the most strenuous and persistent boycott. *The use of the Union Label is not optional,* at least this is the experience of cigar manufacturers. Factories have employed Union labor and complied with all Union conditions except that they would not affix the Union Label on their brands. Strikes have been precipitated to enforce this ruling. On certain high grade brands of cigars the Union Label is a serious drawback in the sale of the product, and to give this emblem the status of a registered Trade Mark is but the first step to its compulsory use wherever the Union issuing same has sufficient powers.

The registration of the Union Label is necessarily illegal. *It is not, nor can it ever be made a Trade Mark by process of law.* This opinion has been laid down by the Trade Mark Branch of the Department of Agriculture, and by several eminent trade mark authorities in Canada. A Trade Mark is essentially a mark placed on a piece of merchandise to indicate its ownership. To register the Union Label would be to accord the Unions part proprietorship in every piece of merchandise to which their label was affixed. According to the legal advice of the Dominion Cigar Manufacturers' Association, such an act could not be sanctioned by law.

The registration of the Union Label would be simply disastrous to cigar manufacturing interests in Canada, and would eventually ruin the immensely valuable assets owned by cigar manufacturers in their popular labels and brands.

The Attitude of the Master Printers.

Mr. Ralph Smith, M.P., when introducing the Union Label Bill in the House of Commons on January 30th, 1905, gave the names of fourteen printers that were using the Union Label; seven of these are publishers of newspapers, the other seven are small employers.

The following resolution, passed February 9th, 1905, shows the attitude of the important book, journal, job, etc., offices in Toronto:—

"Whereas the Bill now before Parliament to legalize Trade Union Labels, discriminates in a most objectionable manner between free and union men of Canada, and places within the control of the Trades Union a dangerous weapon *to intimidate the free working men of Canada,* and to compel the manufacturers and employers of Canada to unionize their shops,

"Therefore, be it resolved, by the Master Printers' and Bookbinders' Association of Toronto, that the Bill is directly opposed to the best interests of the employers and free workmen of Canada, and should not receive the consent of the House of Commons or of the Senate."

The Standing of Those Who Use It.

Mr. Smith cites in all the names of seventy-eight manufacturers using the union label and working harmoniously with the Trades Unions. These seventy-eight firms (with all due respect) are not at all representative of the trades in which they are engaged. Fifteen of the names are not given in Dun's reference book. Twenty-one have no rating. Fourteen are rated less than $1,000, seventeen up to $10,000, and seventeen above $10,000.

Thirty-eight are cigar manufacturers, yet the members of the Dominion Cigar Manufacturers' Association, as already stated, make 85 per cent. of the total production of cigars in Canada. Fourteen are printers, yet the employees of all fourteen combined do not number as many as are employed in some single printing offices in Canada. Of the remainder, some few undoubtedly are firms of recognized standing and importance, but they are the exception, and not the rule, and where the label is used by such firms it will be found that in the majority of instances it has been adopted, not through sympathy with the unions, but as a business necessity, their goods being consumed almost entirely by laboring classes.

An Opinion From One Who Knows.

One of the companies mentioned by Mr. Smith as using the label writes under the date of February 9th, 1905, as follows: "We are quite in accord with the manufacturers generally, in believing that such Bill should be opposed and turned down, notwithstanding that we are using the Union Label ourselves. We know through experience how difficult it is to drop the Label when once it has been used, and we know also the troubles that the use of the Label brings, through the Union."

The Union Label in Export Trade.

The manufacturers of Canada have during the past ten years made wonderful strides in the development of an export trade and have found markets in all parts of the world. This development is of the greatest importance to Canada. It uses Canadian raw material, employs Canadian labor and brings capital to Canada.

Export trade is carried on in a number of ways. To Great Britain it is largely done direct with merchants, either wholesale or retail. Much of the business with South Africa, South American countries and Australia is carried on in an entirely different way. A large part of it is done through and financed by New York Export Commission houses. These firms, such as Messrs. Strong & Trowbridge, Messrs. George F. Peabody & Co., and many others,

act for merchants in these countries named. They buy in the cheapest and best market, and are remunerated by their principals on a commission basis. In order to preserve this business, they find it absolutely necessary, in many cases, to conceal the identity of the manufacturer, in order that the merchant in the foreign country and the manufacturer may not get in direct communication and dispense with the middle man.

To do this they insist that the goods shall bear no identifying mark. In some cases they even provide the packages and labels for the goods. If a manufacturer is compelled to use the Union Label in his shop, every package he manufactures must bear the same. The result would be that he would be entirely at the mercy of the Trade Union as regards this trade.

The Boycott in Canada.

The experience of manufacturers in all parts of the United States has gone to show that without unionized shops their products are constantly exposed to persecution through the instrumentality of the Union Label.

The same conditions, though perhaps to a lesser degree, now obtain in Canada. The unions have advertised in the daily press that "the Union stamp on shoes means the only shoes which are in every way fit for the wear of women and children," and have repeatedly advised the public to purchase only shoes stamped with the union label.

At the present time the unions in Toronto are attempting to boycott a certain cigar company. They have issued circulars stating that the company in question is acting as a medium to dump on the public non-union cigars and trust-made tobacco, the products of firms which are notoriously unfair. "When purchasing tobacco," they say, "always see that it bears the union blue label; it is your only guarantee that fair union conditions prevail. Union men will not patronize stores which assist in every way a trust which is not only opposed to unions but in whose factories young children have been compelled to work as many as 65 and 70 hours a week in order to earn an existence."

Not a Guarantee of Quality.

The statement given below is taken from a letter written by a United States Company that has recently opened an important branch factory in Canada:

"Our experience in the United States has been that when this Label is legalized it becomes a public nuisance and a powerful lever in the hands of the Labor Union, with which to bully the manufacturer into adopting a Union shop, after which the manufacturer is in the hands of the Labor Union. The legalized 'Union Label' is not only a nuisance to the manufacturer, from the above-mentioned standpoint, but is also a nuisance to the public in general, inasmuch as the Union tries to make it a stamp of quality and a representative of the sanitary shop, whereas when the Union gets control of a shop, which it necessarily must in order to have the Label adopted, the cost of production is so vastly increased that the quality immediately depreciates, and as for the sanitary shop, the non-Union shop is, nine cases out of ten, the more sanitary of the two. This has been proven to be the case in all the States where the Label has been legalized without a single exception."

A Weapon to Make Boycotts Effective.

The *New York Commercial*, an authority on commercial and financial topics, in its issue of February 13th, 1904, had the following editorial:

"Very properly the Paper and Pulp Association at its recent meeting refused the impudent request made by a Labor organization to the effect that every roll of paper produced by members of the Association should bear a Union Label. It could not have taken any different action without proclaiming to the world that its members stood ready to take advantage of rival manufacturers who may have chanced to incur the enmity of their employees.

"The Union Label is essentially the device of cowards. The advocates of it seek its general adoption solely in order to make boycotts actually effective. They desire to use it as a club on employers who refuse to yield to the behests of striking employees and walking delegates. Anything like a general adoption of this badge of servility and surrender on the part of employers would mean that not one strike in fifty in which organized labor was concerned would ever be submitted to arbitration. It would encourage trade unionists to be more arrogant and more exacting in their demands. It would constitute a potent weapon for dragooning unorganized workingmen into trade Unions. It would open the door for the wholesale persecution and harassment of small merchants who had the courage, or, from necessity, were compelled to handle boycotted goods. It would give rise to a swarm of labor 'gratfers' seeking to extort blackmail. In the hands of a Sam Parks such a weapon would swiftly bring wealth 'beyond the dreams of avarice.'"

"Employers everywhere act wisely in setting their faces like flint against the use of the Union Label. They are not only protecting their own welfare in so doing, but are promoting the interests and peace of their respective communities. The Union Label properly belongs in the category with the bomb and the dirk of the anarchist."

EMPLOYER'S RESPONSIBILITY FOR SAFETY OF WORKMEN.

Decision in a Case Brought Against the Rhodes, Curry Company for Accident in Their Works.

In the case of Allen vs. Rhodes, Curry & Co., which was tried in Amherst, N.S., in August, 1904, judgment was given on January 11th last, dismissing the action.

This suit was brought by the widow of William Allen, an employee of Rhodes, Curry & Co., to recover $5,000 damages for the death of her husband, caused by explosion of a furnace he was attending in defendants' car works. Plaintiff alleged negligence on the part of the defendants, stating in her claim, "that they did not use ordinary care and diligence for the deceased to use in loading the furnace."

In giving judgment the judge stated "that the master is under obligation to use ordinary care, and, so far as he can by its exercise, avoid exposing his servants to extraordinary risks which they could not reasonably have anticipated, but he is not in any manner bound to guarantee them against such risks, nor to guard against accidents which are not liable to arise. He must warn his servants against perils to which they will be exposed, and of which he is, or ought to be, aware, other than such as they should, in the exercise of ordinary care, have forseen, as necessarily incident to the business in the natural and ordinary course of affairs. More than this is not required of the master. Deceased had been in defendants' employ and engaged in loading and operating the smelting furnace in question for upwards of a year. He was familiar with the methods employed in preparing the scrap iron for the furnace in charging it, and with the material smelted in it from day to day. The course of the business must have given deceased notice of the perils, if any, incident to the use of scrap iron of all kinds. Whatever danger was involved in the work must consequently have been apparent to him. Moreover, he handled the material, or assisted in handling it, which was put into the furnace a quarter of an hour or so before the explosion. The men employed in and about the furnace and upon the scrap heap, I must assume, were experienced and competent for the work they had to do. If, therefore, the explosion was due to their negligence, or that of any of them, either in the manner in which they charged or operated the furnace or in the material they put into it, the plaintiff cannot recover."

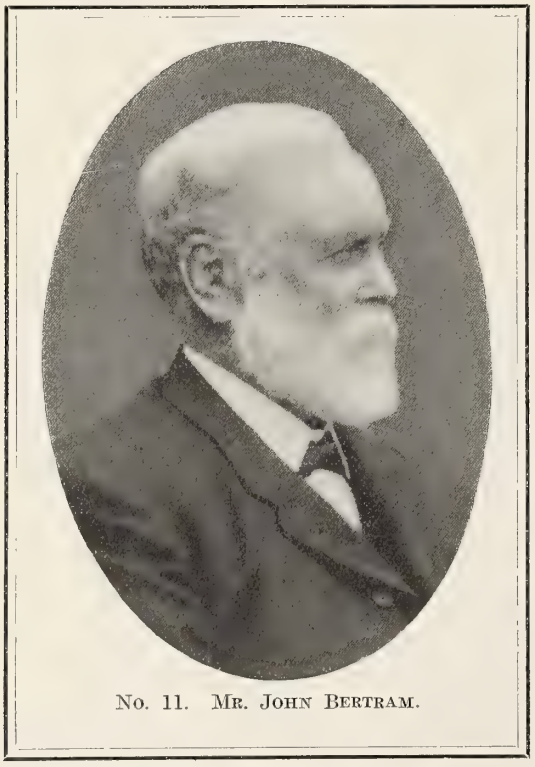
Among the Industries

THE MANUFACTURERS OF CANADA.

The name of John Bertram, head of the firm of Bertram & Sons, of the Canada Tool Works, Dundas, is well known in manufacturing circles throughout the Dominion, as well as in many other parts of the world.

He was born at Eddlestone, Peeb'eshire, Scotland, September 13th, 1829, his parents being Alexander and Margaret Bertram. The latter's maiden name was Aimers. She was the descendant of a family the male members of which were leading millwrights and engineers from the beginning of the seventeenth century; in fact, they were the pioneers of the millwrighting industry in the south of Scotland. In the old burying ground in the manufacturing town of Galashiels there is a headstone on which is engraven a cog wheel, compass and square, and an inscription recording the fact that Robert Aimers, millwright, died in 1739, aged 78 years.

As a boy, young Bertram, who was fourth of a family of eight children, attended the parochial school in his native place, afterwards taking a course at Galashiels, where he subsequently learned his trade as a machinist with his uncle, Thomas Aimers. In May, 1852, he married Elizabeth Bennett, a daughter of the late Henry Bennett, and with her he came to Canada in the same year, locating in Dundas. For nearly eight years he worked in the old Gartshore foundry, then one of the leading manufacturing establishments in Canada, and in 1865 he formed a partnership with Robert McKechnie, Jr., under the name and style of McKechnie & Bertram, in the manufacture of iron and woodworking machinery.



No. 11. Mr. John Bertram.

The firm started in a small way as regards capital, but its members had pluck and energy, combined with a mechanical skill and aptitude which ultimately made the Canada Tool Works one of the most famous of its kind in the country—a reputation which, we need hardly say, it successfully maintains at the present day. The works were destroyed by fire in the second year of the partnership, but they were put in operation again with renewed vigor, and the business has kept increasing until to-day it is one of gigantic proportions.

Mr. Bertram continued in partnership with Mr. McKechnie until 1886, when the latter retired, and the former took in as partners his sons, Henry and Alexander, thus forming the firm of Bertram & Sons, the juniors, as well as their father, being thoroughly practical machinists. The new firm at once proceeded to make a complete change in the style of their machinery and in the system of managing the works, and the business has been going on with great success ever since. About 350 hands are constantly employed.

In 1901 the firm was incorporated as a joint stock company under the name of The John Bertram & Sons Co., Limited, the Board of Management being John Bertram, Alexander, Henry, James and Thos. A. Bertram. Since then the company made a further step in advance in machine tool construction by thoroughly modernizing everything up to the latest standard for rapid work.

Mr. Bertram was one of the first members of the Canadian Manufacturers' Association. He was President in 1893 and has since served continuously upon the Executive Council. In the fall of 1903 he accompanied the manufacturers on their excursion to the Pacific Coast, and was one of the most enthusiastic members of the party. Though now in his 76th year, he still takes a keen interest in the advancement of Canadian and British interests.

Fort William's growing time still continues, with no sign of a let up. As soon as the frost is out of the ground the J. I. Case Co. will begin operations on their extensive implement factory. Near their property is the proposed site of the Canada Car Co.'s mammoth foundry. John Deero & Co., another large concern engaged in the manufacture of agricultural implements in the United States, are said to be about to locate at Fort William. The town's already large grain storage capacity will be increased by the addition of still another elevator, to be financed by a local syndicate.

The Ontario and Minnesota Power Company, Ltd., is the name of the particular branch of the Backus Syndicate which will develop hydraulic and electric power at Fort Frances, Ont. The share capital is placed at $3,000,000.

The Breithaupt Leather Co. are making preparations to increase the output of their Penetang tannery from 300 to 500 sides of sole leather per day. The town council has granted them exemption on their improvements for a term of years.

Messrs. Swan & Hunter, the well-known shipbuilders of Wallsend-on-Tyne, England, have purchased an extensive area of real estate near Halifax, and it is stated that, in connection with a Canadian syndicate, they will establish a plant there for the building of steel ships. The Dominion Government will be asked to assist the undertaking with a subsidy. Among the Canadians who will be found on the directorate of the new company are Messrs. B. F. Pearson, of Halifax, and C. I. DeSola, the latter being the present manager of Swan & Hunter's business in Canada.

The *Canada Gazette* gives notice of the incorporation of the Monterey Electric and Gas Co., Limited, with a capital stock of $3,000,000. The provisional directors include Messrs. Wm. MacKenzie and Z. A. Lash, of Toronto, and H. S. Holt, of Montreal.

The plans of the Grand River and Western Power Co. call for the construction of a water course and feeder from Dunnville and a raceway northerly from the Grand River to Jordan, on

Lake Ontario, from which point the proposed electrical energy and hydraulic power will be developed and transmitted to Brantford and other municipalities in Western Ontario.

The Canadian Locomotive Co., Kingston, are building four more locomotives for the Temiskaming and Northern Railway. This makes a total of 85 engines for which orders have been received by the company from the Dominion and Ontario Governments.

The new factory of the Berlin Felt Boot Co. has been completed, and is now in operation. About 200 hands are employed.

Douglas Ford & Company, printers, announce that they have moved into their new premises, corner of Simcoe and Adelaide Streets, Toronto.

The machinery in the immense works of the International Portland Cement Company, at Hull, was set in motion on January 11 last, on the occasion of a visit from the new board of directors, of whom Sir Sandford Fleming is President. Everything is reported to have worked very satisfactorily. The huge rotary kilns, weighing 120 tons each, ran like clockwork, while the big rock crusher demonstrated its ability to pulverize 125 tons of limestone per hour. Though the buildings are practically fireproof, a complete private fire-fighting plant has been installed.

The George H. Lee Company of Omaha have decided to open up a branch factory in Canada, and will probably select Winnipeg as the location for it. They are manufacturers of steam feed cookers, dipping tanks, all kinds of poultry supplies and stock food. They hope to have their plant in operation during the present year.

Letters of incorporation have been granted to The Miramichi Pulp and Paper Company, Limited, who are taking over the mill of the defunct Maritime Sulphite Fibre Cimpany, Limited, in Northumberland County, N.B. Messrs. George T. and Charles W. Keyes, of East Pepperell, Mass., both practical paper makers, are at the head of the new firm which is capitalized at $300,000.

The Vulcan Soot Cleaner Co., of Du Bois, Pa., has practically decided to establish its Canadian headquarters in Hamilton, Ont. They will build a large factory in which about fifty hands will be employed.

Keenan Bros. of Owen Sound, who recently bought out the business of the Parkhill Basket Co., have decided to enlarge the plant so as to include the manufacture of a number of lines of woodenware. Work has already been started on the erection of a stave mill, dry kilns, tramways, engine house, etc., and they hope to have their goods on the market early in the spring. The business will be carried on under the name of the Keenan Woodenware Manufacturing Co., Ltd., with a capital stock of $100,000.

Letters of incorporation have been granted to Davies, Limited, who will carry on the business of a packing house in all its branches. Their chief place of business will be Montreal, and their capital $500,000.

Messrs. Foley, Lock & Larson, wholesale grocers of Winnipeg, are putting up a brick addition to their warehouse 116 x 100 ft., five storeys high, which will be used as a factory for the manufacture of biscuits and confectionery. They are said to have unlimited capital at their disposal, and will instal the most modern machinery procurable. They expect to have their building completed early next fall. When in full operation three hundred hands will be employed.

A company with $1,000,000 capital, known as the Atikokan Iron Company, has been formed by MacKenzie & Mann for the purpose of manufacturing pig iron and other products of iron and steel at Port Arthur, Ont. The ore will be supplied from extensive holdings of the company along the line of the Canadian Northern. The plant which it is proposed to erect will consist of a blast furnace of 100 tons capacity, coke ovens, and an ore roasting plant. Supplementary to this company another, called the Canadian Coal and Ore Dock Co., will spend $500,000 in the construction of coal and ore docks. It is generally understood that the Pittsburg Coal Co. is largely interested in the latter.

Owing to the death of Mr. Hutchison, the partnership formerly existing between Hutchison, Shurly & Derrett has been dissolved. The interest of the late partner has been bought by Mr. R. F. Shurly, and the business will in future be carried on under the name of Shurly & Derrett.

Mr. E. D. Cleghorn, of Manchester, England, who has been in this country for some weeks in the interests of the Acme Lathe and Products Co., announces that his firm will in all probability establish a branch factory in Toronto within a very short time for the manufacture of set and cap screws, nuts and washers.

H. G. Waddie, formerly associated with the Clergue interests, has been instrumental in forming a company known as the Canadian Drawn Steel Co., which will manufacture shafting and other varieties of steel for farm implements and factories. A factory will be built in Hamilton, to be ready by the end of June, in which about sixty men will be employed. The industry will be the first of its kind in Canada.

The contract has been awarded by the city of Winnipeg to Babcock & Wilcox, Ltd., Montreal, for the installation of two of their 250 H.P. boilers. This is an addition to the power plant of the city water-works system, in which five of the same type of boiler were installed some five years ago.

The cement plant which Mr. A. C. Ross and others are erecting at Sydney will have an initial capacity of 500 barrels per day. The cost of construction and equipment will be about $250,000, and in addition to the production of cement there will be an extensive cooperage in connection with the works. It will be the only cement mill in Canada east of Ottawa, and should supply a large local market, besides being excellently situated for shipping purposes.

Mr. Hugh C. MacLean, publisher of the Winnipeg *Commercial*, has bought out the *B. C. Lumberman* from Mr. D. Todd Lees, who established it a little over a year ago. It is the intention of the new proprietor to enlarge and improve the paper, and make it include Manitoba and the Territories, besides British Columbia. The office of publication will remain at Vancouver.

The Department of Fisheries has issued an order stating that the conversion of herring into guano must cease. Quite an industry has been built up on the Fraser River, near Ladner, by manufacturing the salmon offal from the canneries into fertilizer. Some $60,000 has been invested in plant. It was found that to keep the oilery in steady operation more material was needed than the canneries could supply, and for this purpose permission was obtained to use the smaller herring which frequent the coast bays. Although these fish are said to have no commercial value as an article of food, their use in the manufacture of fertilizer will henceforth be prohibited.

An Ontario charter has been granted to the firm of Carson, May & Borbridge, Ltd., who will engage in the manufacture of trunks and leather goods in Ottawa.

The C.P.R. is said to have laid plans for the erection of extensive repair shops at Medicine Hat, which the townspeople believe will be the biggest between Winnipeg and the Coast. Fresh gushers of natural gas are being struck from time to time, and a period of great industrial progress is looked for.

The Dominion Iron and Steel Co. have awarded valuable contracts for the extension of their steam power and electric plants, the former to Goldie & McCulloch, of Galt, and the latter to the Canadian General Electric Co. The contracts were secured by the Canadian firms in direct competition with the largest English and United States concerns. The additions to the power plant have been made necessary by the construction of rail and rod mills, and other improvements in the works.

The Shepard & Morse Lumber Co., of Ottawa, have purchased some valuable timber limits on the Montreal River, Temiskaming District, which cover in all 1,005 square miles. The price paid is said to have been $250,000.

Foreign Trade News

World's Wool Production.

According to the estimate prepared by the National Association of Wool Manufacturers of Boston, the world's wool production in 1903 amounted to 2,666,000,000 lbs. Europe led the van with 938,000,000 lbs.; next came South America with 510,000,000 lbs.; Australasia, 500,000,000 lbs.; North America, 304,500,000 lbs.; Asia, 274,000,000 lbs.; and Africa, 134,450,000 lbs. The countries contributing most largely to this immense total were:—

Australasia	500,000,000	France	103,500,000
Argentina	370,000,000	Spain	102,500,000
Russia	361,000,000	British S. Africa	100,000,000
United States	287,000,000	Uruguay	96,000,000
United Kingdom	133,000,000	British India	85,000,000

Trade Openings in Italy.

A recent report by the United States Consul at Venice states that there is an excellent opportunity for the sale of good and cheap motor launches there. During the past year a company has been formed for the purpose of letting motor launches on hire, and already it possesses a number of these launches. Many Venetian families are beginning to have their private motor boats, and in the Consul's opinion, others will buy when the right boat is produced.

In the same report the Consul remarks that Venetia is essentially an agricultural country and requires farm implements and machinery. Locks and hardware would also find a sale in this region. Good, easy-working revolving desk chairs are most difficult to find, and to have one made to order would cost about four times the value of the article.

Steamship Service to Venezuela.

A direct service between New York and Venezuelan ports was established during the past month by the Hamburg-American Line. The regular ports of call will be Curocoa, La Guayra, and Puerto Cabello, and it is the intention to make the service a monthly one both ways. The sailings are being arranged to connect with a coastwise service recently established, taking in the ports of Maracaibo, La Guayra, Puerto Cabello, Guanta Cumana, and Carupano. It is thought that the coastwise line will be extended up the Orinoco to Ciudad Bolivar, which is the entrepot of trade for the Orinoco valley. The Hamburg-American Line at present run a monthly service from Hamburg to Porto Rican and Venezuelan ports, and it is likely that the new line from New York will prove to be simply an extension of that service, the steamers continuing the voyage to New York from Venezuela instead of returning to Hamburg. Steamers from New York to Venezuelan ports will probably proceed to Hamburg from there. By the new line through bills of lading may be had to every important port in Venezuela.

Condensed Milk.

Trinidad.—In consequence of the scarcity of cattle, due to the falling off in the imports of live animals from Venezuela, there is an ever increasing demand for condensed milk in Trinidad. The imports during the last fiscal year were more than $15,000 in excess of those of the previous twelvemonth.—*French Vice-Consul, Port of Spain.*

Agricultural Machinery and Driving Engines.

Australia.—Canada has now the lion's share of the trade in imported cultivating and harvesting machinery, but it has not secured the trade open to it in the other departments of farm machinery. There are good opportunities for threshing and cleaning machinery and traction engines to drive them, but it is useless to expect any Australian firm to make a success in introducing lines novel to the country, and which require changes to fit them for the conditions found here. An enterprising firm sent out seven years ago a traveller and a number of fanning mills to New Zealand, but he found that the machines would require to be reconstructed. A company was formed which made the needed changes and it is now doing business in New Zealand and Southern Australia.

Canadian engines are used for driving saw mills, but I have seen none employed on the farm and for general traction, although many from England and some from the United States are used. A Canadian firm sent out an expert with two or three engines and he found that with certain changes to fit them for the rough roads and tracks on which they would require to be used—the substitution of steel for cast-iron drive wheels being the chief—there would be a great demand for them. The higher speed enabled lighter engines to be used than those now generally employed. Unfortunately nothing has been done since.

With respect to these, as in the case of many other lines, they must be introduced by a specialist who thoroughly understands how to work them. A failure or two through defective handling at the outset would condemn the machines and stop sales.—*Canadian Commercial Agent, Sydney.*

Japanese Customs Tariff.

The new extraordinary import tariff, which forms one of the war tax items, was promulgated by the Imperial Japanese Government on January 1. The tariff will become operative six months hence, that is on and after July 1, 1905. The extent to which the principal Canadian goods will be affected by the new tariff, together with the ordinary tariff now in force, will be seen from the following list:—

——	Ordinary Tariff.	Extraordinary Tariff.	Total.
Flour (133 lbs.)	23 cents	27 cents	50 cents
Condensed milk (Doz. 1 lb. tins)	17 "	17 "	34 "
Cheese (1½ lbs.)	3 "	3 "	6 "
Lumber	5 p.c.	.....	5 p.c.
Salted salmon (133 lbs.)	.....	.....	.....
Tinned salmon (1½ ")	15 p.c.	15 p.c.	30 p.c.
Tinned peas (1½ ")	15 "	15 "	30 "
Pulp (133 lbs.)	17 cents	.....	17 cents
Iron, bar and rod (133 ")	23 "	5 p.c.	.....
Bicycles and motors	25 p.c.	5 p.c.	30 p.c.
Oil cake (fish manure)	Free	Free	.....

Of the articles enumerated above, condensed milk and iron are included in the convention tariffs, and therefore the Japanese Government cannot levy more than 6⅓ cents and 13 cents respectively in respect to these goods imported from the foreign countries having treaties with Japan. This, however, is not applicable to Canada. As regards the other articles mentioned in the foregoing list, Canada and other countries stand on the same footing in respect to the tariff.

Expansion of Trade with South Africa.

One of the most noteworthy features connected with the development of Canada's export trade within the past few years has been the tremendous impetus given to the sale of Canadian products in the markets of South Africa. Taking the figures prepared by the Customs Department of that country as a basis for comparison, we find that their imports of Canadian goods since 1900, exclusive altogether of military stores, were as follows:—1901—5,510 pounds; 1902—61,577 pounds; 1903—452,817 pounds; 1904—556,000 pounds.

The reason for this remarkable growth is of course not far to seek. It is only necessary to recall the enormous orders re-

ceived by manufacturers of this country from the British war office to understand how the trade originated. Its further expansion has been stimulated, first, by the receipt of information from those who enlisted with the various contingents as to the possible openings for Canadian products, and second, by the adoption of the preferential tariff.

Commenting upon its growth, *The British and South African Export Gazette*, says:—

"It is, of course, natural that the larger proportion of the Canadian shipments should be foodstuffs: as a matter of fact, 56.5 per cent. of the total exports to South Africa came under this category in 1904. The largest item in the whole list is flour, shipped to close on £130,000, showing a good increase on the amount for the previous year, and hopes are strong that the trade will assume very much larger dimensions still, in spite of the big surplus available from Australia. There were increases also in wheat and other cereals; a really considerable advance in hams and pork; and a noteworthy improvement in condensed milk. An important item, which we have included under 'meat,' is poultry, shipped to the extent of over £2,000, and comprising fowls, geese, ducks, and turkeys, this line, however, finding considerable competition from Australia. Other items which do not appear in the table but deserve mention are apples and canned salmon, in both of which considerable headway is being made.

About 20 per cent. of the entire trade is in respect of timber and wooden manufactures, deals and planks being the principal items, and each showing enormous increase. The inclusion of match blocks shows the dependence of South Africa on Canadian produce for one of its principal industrial ventures. Formerly all the timber trade came via New York, but the direct line of steamers, inaugurated some time since, has already been successful in winning back a considerable portion of the consignments, which can be put on board at Montreal cheaper than at New York, although the freight rates are about the same. One boat alone recently took out to South Africa as many as 30,000 deals. A large share of the Canadian timber shipments is for Johannesburg.

The metal manufactures shipped from Canada to South Africa are, up to the present, of no considerable volume, representing no more than 5 per cent. of the total. They may be taken, however, as the nucleus of a more expanded trade in the near future, and, as such, are not without their importance. Machinery, it will be noted, has doubled the figures for the former year. In other lines there are good increases, viz., in carriages and cycles, and textile goods. The decline in oats and hay may be ascribed to the withdrawal of British troops from South Africa. Altogether, the figures are sufficient to show that Canadian trade with the sub-Continent is now on a firmer basis, and, with enterprise and prudent cultivation on the part of Canadians themselves, should develop into one of the most important links in the great Imperial commercial chain that is rapidly being forged."

Argentina's Financial Development.

Statistics compiled from semi-official sources seem to support the general belief that the Argentine Republic is enjoying a period of unprecedented prosperity. During the past three years it has experienced a tremendous forward movement. In almost every branch of its industrial and commercial life it has displayed a wonderful vitality, a vitality which marks it out as a splendid field for the manufacturers of this country to exploit.

Its total imports and exports of merchandise since 1901 have been as follows:—

	Values in Gold Dollars.		
	Imports.	Exports.	Total.
1901-02	103,700,000	173,300,000	277,000,000
1902-03	125,500,000	218,900,000	344,400,000
1903-04	169,600,000	248,100,000	417,700,000

From the above it will be seen that in two years the imports have increased 65% and the exports 43%.

The products which have mainly contributed to the increase in the exports are wheat, maize, linseed, and flour. The proportionate amounts may be gathered from the following:—

	1901-02	1902-03	1903-04
Wheat	19,000,000	41,200,000	60,600,000
Maize	21,900,000	29,300,000	36,600,000
Linseed	17,800,000	18,300,000	29,400,000
Flour	1,800,000	2,900,000	4,200,000

During the past year wool exports have somewhat decreased, though taking the period since 1894 as a basis, it may be said that the production of wool has remained practically stationary, the export fluctuating between 190,000 and 205,000 tons. This, however, does not mean a backward movement, but simply a more intense production from the smaller areas devoted to sheep ranching. There has been a general tendency to break up the ranches for the growing of wheat, or in some cases alfalfa, which, as is well known, is more suitable for cattle than for sheep.

Some further statistics showing the volume of foreign trade per unit of population may be of interest:

Average for 5 Years.	Gold Dollars per Inhabitant.		Miles of Railway.
	Imports.	Exports.	
1868-73	27.94	19.02	516
1873-78	21.18	20.39	1,096
1878-83	22.54	22.30	1,591
1883-88	35.50	27.34	3,571
1888-93	32.15	28.71	6,949
1893-98	24.70	27.48	9,061
1898-03	24.64	38.29	10,545
Year.			
1903-04	33.35	48.79	11,737

The general prosperity of the country is reflected in the financial statements of the banks, which show an increase in current account balances and other deposits since 1902 of 62%, and an increase in paper money during the same period of 31%. National mortgage bonds (Cedulas, H.) which sold in 1902 for $84.60, are to-day worth $103.50, while the rate of discount on commercial promissory notes has fallen from 6 and 7 per cent. to 4 and 4½ per cent.

Commenting upon the above facts, Mr. T. R. Ainscough, of Buenos Aires, states that there can be no doubt that the prosperity of the country is on a much firmer basis than ever before. Prior to 1890 the principal wealth of the country was its cattle. A decrease in the production or a drop in prices caused lamentable undoings in the financial situation. But latterly agriculture has been gradually developing. The acreage of land under cultivation has increased in all parts of the Republic. Grain is being raised so generally, and in so many different zones, that local weather conditions or locust invasions affect only in a slight degree the crop at large. A more even and normal yield is thus ensured, and large differences in the commercial balance will become less probable and less possible as time goes on.

There are, besides, a number of other elements favorable to the continuance of Argentina's prosperity. Internal and external peace has been secured. A vigorous immigration policy is peopling its fertile plains with a hardy and thrifty class of settlers. The new President is a man of recognized intelligence and of long experience in public life, and his inaugural address was received with great enthusiasm in political and commercial circles. The general feeling of confidence therefore in the economic and financial development of the Argentine Republic seems to rest upon a foundation of solid fact.

Carriages.

Australia.—Recent advices from Fremantle and Perth indicate that the first shipment of Canadian carriages to Western Australia has given every satisfaction. The company, which handle these goods, is hopeful of largely increasing the trade by having

hicles built according to the specifications required by that ate. As pointed out in previous reports there is a fine carriage siness to develop in Western Australia, and another import- g concern at Fremantle has been supplied with carriage cata- gues, which I had available at this office, as they urgently re- uired them.—*Canadian Commercial Agent, Melbourne.*

Tobacco.

Cuba.—Early in January a large party of Canadian tobacco manufacturers, including Messrs. J. M. Fortier and Alphonse oulet, of Montreal, Bruce Payne, of Granby, and Mr. Miller, f Quebec, paid a visit to Havana, Cuba, where they were ntertained royally by the planters of that country. "The bject of the visit," to quote the words of Mr. Nathan Michael, ne of the party, "was to induce more direct business connec- ions between Canadian manufacturers and the Cuban planters. hat this object has been attained, I have little doubt. Formerly t has been our practice to buy our raw materials from United States houses. Now we will do business direct with Cuban planters. The result, I should say, would be to give a cigar of better quality for less money than is the case at the present time. The Canadian manufacturers on this trip gave larger orders than ever before in their experience, so that it should assist in the establishment of direct steamship connections, as I have said, because, under existing conditions, we will have to bring the tobacco through from New York in bond."

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

260 **Agencies—Cork**—Inquiry has been received from **Cork, Ireland,** for names of Canadian export and important houses desirous of having a selling or buying representative in the south of Ireland.

261 **Hamburg**—A young man in **Hamburg, Germany,** having a good knowledge of the English and French languages is seeking the representation of Canadian firms.

262 **Liege**—A correspondent in **Liege, Belgium,** is desirous of representing Canadian manufacturers in that market and solicits correspondence.

263 **Apples**—A **London, England,** firm of fruit and vegetable importers are seeking to establish business relations with Canadian shippers of apples.

264 **Boots and Shoes**—An Indent and Manufacturers' Agent in **Christchurch, New Zealand,** desires to secure the agency of a Canadian manufacturer of boots and shoes. This correspondent calls regularly in the principal towns in New Zealand and has a connection with both the wholesale and retail trade.

265 **Boots and Shoes, Wall Paper, Hardware**—A company in **Wellington, New Zealand,** recommended by one of the members of the Association is desirous of being appointed representative for New Zealand of Canadian manufacturers in the above line of goods.

266 **Boots (Rubber)**—A correspondent in **Auckland, New Zealand,** desires to procure the agency or the sole control for New Zealand in the above line. The same can be carried along with a line of leather boots and shoes that they are now handling from Canada.

267 **Butter**—A large purchaser of buter in **Rotterdam, Holland,** who pays for all goods cash against documents, solicits correspondence from Canadian shippers.

268 **Butter, Cheese and Eggs**—A firm who are likely to be large buyers of butter, cheese and eggs for the **London** market are anxious to get into communication with exporters in Canada.

269 **Carriages (Baby)**—A correspondent in **Bristol, England,** has for sale the patent right for an invention for a safety baby carriage which he wishes to dispose of in Canada.

270 **Colors, Varnishes, Chemical Products, Toilet Articles, Boot Blacking, and Rolled Oats**—A correspondent in **Brussels, Belgium,** solicits correspondence from Canadian firms in a position to supply the above lines of goods.

271 **Corsets, Blankets, Prints, Ducks, Denims, Drills, Etc., Woollens, Wire Nails and other goods suitable for West India Trade**—A dry goods and general merchant carrying on a wholesale and retail business in **Montserrat, B.W.I.,** since 1869, desires to purchase the above and other goods suitable for West India trade. All transactions on a cash basis. A Canadian reference is forwarded.

272 **Feed**—A company in **Belize, British Honduras,** solicits correspondence from Canadian shippers of cattle and stock feed generally.

273 **Flour**—(a) The name of a merchant in **St. Vincent, B.W.I.,** has been forwarded us by one of our members as a merchant desiring to introduce Canadian flour in that Island.

274 (b) A large flour importer in **London, England,** wishes to be placed in touch with a first-class mill in Manitoba which grinds spring wheat, and also a good winter wheat mill in Ontario.

275 **Furniture (Bent Wood)**—A company in **Melbourne, Australia,** already purchasing a number of lines of Canadian goods desires to correspond with shippers of bent wood furniture.

276 **Grain and Flour**—Inquiry has been made by a **London** firm of grain and flour importers for names of Canadian exporters of those products.

277 **Groceries**—A Colonial and continental produce broker is seeking additional lines in the grocery and allied trades to work on commission for Canadian houses.

278 **Handles (Hickory), Hashers, Universal Dressers, Axe Handles, Etc.**—A firm of timber merchants established in the wholesale business in 1850 in **Cannock, England,** desires to purchase large quantities of the above goods. References are forwarded.

279 **Hardware, Machinery, Tools and Articles for Engineering and Iron Trades**—A firm of engineers and merchants in Glasgow, desires to get in touch with Canadian manufacturers of the above articles with a view to placing the same on that market.

280 **Hardware, Agricultural Implements, Cream Separators, Steel Wire, Wire Netting, and Building Material**—A manufacturers' agent and importer with offices and show roms in Capetown, South Africa, desires to get in touch with Canadian shippers in the above lines. This gentleman is now forming a partnership with the intention of increasing and extending his business and for that reason is seeking new agencies.

281 **Hides (Cow), Goat and Sheep Skins, Leaf Tobacco**—A general merchant in **Raniganj, Bengal, India,** carrying on a wholesale and retail business since 1890 desires to procure the above goods. He asks for quotations f.o.b. Calcutta, terms cash on delivery.

282 **Leather, Boots and Shoes**—A correspondent in **Aldershot, England,** carrying on the business of wholesale commission agent and contractor for the last 15 years desires to communicate with Canadian shippers of the above, payment to be made monthly. References are forwarded.

283 **Linseed Meal and Cake**—A firm in Great Britain desirous of importing linseed meal and cakes for cattle, has asked to be referred to Canadian shippers interested.

284 **Hardwood and Pine Lumber**—A merchant from **Dresden, Germany,** who is at present in St. Louis, Mo., desires to get in touch with Canadian shippers of hardwood and pine.

285 **Merchandise (General)**—An importing firm of good standing in South Australia, having a London office, is seeking to establish business relations with Canadian exporters in the first rank.

286 **Oils, Greases and Tallow**—An importer doing business on a commission basis is open to buy oils, greases, tallow and other products from Canadian sources.

287 **Oil (Rape Seed)**—A correspondent in **Antwerp, Belgium,** asks for the names of Canadian importers of rape seed oil.

288 **Peas (Split)**—A **New York** firm desires to communicate with Canadian shippers of split peas for export trade.

289 **Pegs (Shoe)**—A firm in **Budapest, India,** solicits correspondents from Canadian shippers of shoe pegs.

290 **Produce**—(a) A **Glasgow, Scotland,** agent is seeking the representation for Scotland of Canadian exporters of agricultural produce.

291 (b) A well-established **London, England,** firm in touch with all British produce markets can handle promptly any goods that Canadian exporters may wish to dispose of.

292 **Provisions and Cheese**—Inquiry is made respecting Canadian provision, cheese or canned goods exporters who may contemplate the appointment of an agent in the north of Ireland.

293 **Rails (Steel) and Railway Spikes**—A correspondent in **Mexico** desires to communicate with Canadian firms in a position to supply the above. Contracts are now pending for rails as follows: 10 kilometers of 50 lb. rail; 15 kilometers of 25 lb. rail and 50 kilometers of either 50 or 56 lb. rail. References supplied on request.

294 **Rubber, Rubber Goods, Wire Rope, Stoves and Heating Appliances, Tinware, Enamelled Ware, Hardware, Whisky, Dry Goods and Novelty Goods.**—The head of an import and export company in **Brussels, Belgium,** who was resident in America, and well acquainted with Canadian business methods, desires to represent firms in the above lines on a commission basis, or is prepared to buy such goods; terms cash on delivery. They ask for quotations f.o.b. steamship Montreal or Quebec, and send a reference as to their commercial standing.

295 **Shafts (Steel) and Pipe Fittings**—A Canadian firm asks for the names of manufacturers of drop forge steel crank shafts for gasoline engines. They also ask for brass pipe fittings ⅜″ to 1″ and brass oil and grease cups.

296 **Skewers and Handles**—The addresses of Canadian exporters of skewers, handles for hammers, pick shafts, etc., have been asked for from **London, England.**

297 **Skins (Calf and Sheep), Horse Hides, Wool**—A correspondent in **Odessa, Russia,** is desirous of selling to Canadian firms the above named articles. He forwards particulars and ruling prices.

298 **Stationery, Library and Office Furniture**—A correspondent in **Antwerp, Belgium,** wishes to be put in touch with Canadian manufacturers of the above lines. The business carried on is wholesale and retail, established for the last three years. References are forwarded.

299 **Stoves (for Heating Irons)**—A correspondent in **Melbourne, Australia,** who owns a patent right for a stove for heating irons, desires to correspond with Canadian firms with a view to disposing of Canadian rights.

300 **Tubes**—An English correspondent interested in various patents of use to tube manufacturers has asked to be placed in communication with Canadian firms in the business.

301 **Vinegar**—An English firm of vinegar makers is anxious to extend its business relations with Canada.

302 **Woodenware, Handles, Wringing Machine Rollers, Maple Squares**—A company in **North Mills, England,** that has been purchasing the above line of goods up to the present time from the United States desires to communicate with Canadian manufacturers.

303 **Woodenware**—A **Glasgow, Scotland,** firm dealing extensively in woodenware of all kinds desire to find a responsible commission house in Montreal or Toronto able to place orders in the proper quarter for such goods, ship them, and make draft against documents.

A NATIONAL PREFERENCE IS NECESSARY.

"Fellow-Canadians, don't worry about the tariff. Just ask for goods which you know were made in your own country," says a new periodical called *Canada First*, the main purpose of which is to advocate an individual preference for Canadian goods. It is a good thing for patriotic Canadians to persist in asking for goods "Made in Canada," and if all Canadians were equally patriotic perhaps there would be no need to worry about the tariff, but unfortunately many merchants throughout the country will sell foreign goods in preference to Canadian goods. When their customers ask for Canadian goods they show them not the best Canadian articles, but inferior ones. Even some of the manufacturers who are glad themselves to take advantage of the popular demand for Canadian goods give a preference to foreign goods in making their own purchases. An adequate protective tariff forces the selfish and unpatriotic citizen to do his share in building up the country. Moreover, by bringing about the establishment of many new industries a higher protective tariff would give the patriotic citizen a wider choice of Canadian articles in making purchases. The man who makes up his mind to always ask for goods "Made in Canada" should favor a tariff policy that will cause all kinds of goods to be manufactured in this country on a large scale. The larger the home production the cheaper the goods can be made. Importations from foreign countries lessen the demand for home goods, and consequently increase the cost of production. Those patriotic Canadians who make up their mind to buy Canadian goods must therefore by means of a protective tariff force their unpatriotic fellow-citizens to do the same thing if they wish to get first-class Canadian goods at low prices.

One good Canadian recently remarked, "I am as much in favor of buying goods 'Made in Canada' as any man, but I get tired of asking for them and forcing merchants to show them to me, especially when I am in a hurry. I have sometimes gone to a dozen different merchants before I could get a 'Made in Canada' article of the kind I wanted. If the Government would make the tariff high enough to force these merchants to keep Canadian goods, members of the Canadian Preference League would be saved a lot of trouble."

The growing popular sentiment in favor of buying goods "Made in Canada" must be crystalized into a national preference in the form of a protective tariff in order to produce the best results.

But while we do not agree with *Canada First* in thinking that an individual preference for Canadian goods will make a national preference unnecessary, we wish that bright, well edited and patriotic little monthly success in its advocacy of the policy of personal preference for things Canadian.

Clare Bros. & Co., of Preston, Ont., have purchased a five acre site in Winnipeg, upon which they propose erecting a large foundry. It will be a two storey building with stone basement.

The Lang Tanning Co. have plans ready for a large four storey addition to their Berlin tannery. The new building will be of brick, laid in cement, and when completed will have a capacity of 1,000 sides per day, making it one of the largest and most modern harness leather tanneries in America.

A company has been formed in Amherst, N.S., known as the Dominion Automatic Scale Co., capital $12,000, which will take over the business of the Canadian Automatic Scale Co., now in process of liquidation.

The Società Elettrotecnica Italiana, of Turin, has invented and constructed devices for the application of electric power to plows and other farm machinery. The experiment of plowing by electric power was recently made near Turin in the presence of representative men from different parts of Italy, and, it is reported, with gratifying success.

"PREVENTION IS BETTER THAN CURE."

(*Continued from page* 485.)

country, and our manufacturers owe it to themselves, to make every effort to check the destruction that is taking place. The manufacturers, members of this Association, have it largely in their own hands by vigorously and persistently demanding that *municipalities improve their building regulations and their fire protection,* and that *manufacturers improve their own risks.*

Recognizing that this department can materially aid in the good work, we shall endeavor in next month's issue to show how the latter may be accomplished. As a last word this month we suggest that our members give serious consideration to the value, if not the absolute necessity of protecting themselves by *automatic sprinklers,* those silent, reliable watchmen, always awake, and in all risks and at all times, the unconquerable defenders of your property.

SCIENTIFIC NOTES.

New Boiler-Scale Destroyer.

U. S. Consul Mahin, writing from Nottingham, England, under date November 7, 1904, states that the attention of interested persons in that locality is being directed to a new patent water softener, exploited by the Hull Boiler Fluid Company of Cumberland Street, Hull. It is described as a fluid boiler composition which will "soften" any kind of hard water and greatly prolong the life of steam boilers. It prevents scaling, and in the case of boilers that have already become foul it will gradually disintegrate and remove old scale and prevent priming. Samples of old scale are exhibited which the fluid is credited with having broken up. In some cases, it is said, the scale was a hard, cement-like formation nearly an inch thick. After a use of the scale destroyer for about three months, it is claimed the deposit in the boilers was in the form of a fine, smooth powder or dust, which could be washed away by a hose pipe and water, instead of an incrustation that had to be laboriously chipped off with hammer and chisel.

The composition is described as of a purely vegetable nature, no chemicals being used in any way in its manufacture, and there is said to be nothing in it to injure the plates or fittings of the boilers, whether of iron, copper, brass, or other metal. In order to thoroughly test its behavior in this respect, a large steam boiler was filled with the crude undiluted fluid and run at 60 pounds pressure for three weeks. It was then examined by a boiler inspector and an insurance company's man, and reported to be in perfect condition. It is also claimed that where this softener is employed the steam may be used for the most delicate operations of any manufactory without the slightest ill effect, and that a large number of representative firms have tried it under actual working conditions, and have written, speaking very highly of its effect. It is now under trial at sea for use in marine boilers with salt water.

At the annual meeting of the Pender Nail Works Co., St. John, N.B., it was decided to erect a new mill and equip it throughout with new machinery. Last year's business is reported to have netted the stock-holders twenty-eight per cent. in dividends and bonuses.

The Fruit-Growers' Association of the Niagara District have decided to raise the price of tomatoes from 25 to 30 cents a bushel, and as a result the Canadian Canners' Consolidated Co., who operate three factories in St. Catharines, are threatening to close down. Should they do so, the output of the company's factories in Western Ontario will be increased to an extent sufficient to make up the deficiency. The St. Catharines plants last year distributed about $175,000 among the fruit growers for produce.

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Medicine Hat has 3000 people.
Medicine Hat has waterworks.
Medicine Hat has natural gas.
Medicine Hat has coal.
Medicine Hat is putting in sewerage.
Medicine Hat has good schools, churches and hospitals.
Medicine Hat owns waterworks and natural gas systems.
Medicine Hat sells gas at 17½ cents per 1000 cubic feet.
Medicine Hat is prepared to deal fairly with manufacturers.
The natural products are beef, hides, wool, cement, fire and brick clays.
Address F. G. FORSTER, Mayor, for fuller information.

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of Northwestern Ontario, Manitoba, the Territories and British Columbia are now looked after by the **Lumberman and Contractor,** with offices and staff of writers in Winnipeg and Vancouver.

This publication offers to manufacturers of machinery an exceptional opportunity of reaching direct the lumber manufacturers of sash and door factories, contractors, etc., of Central and Western Canada.

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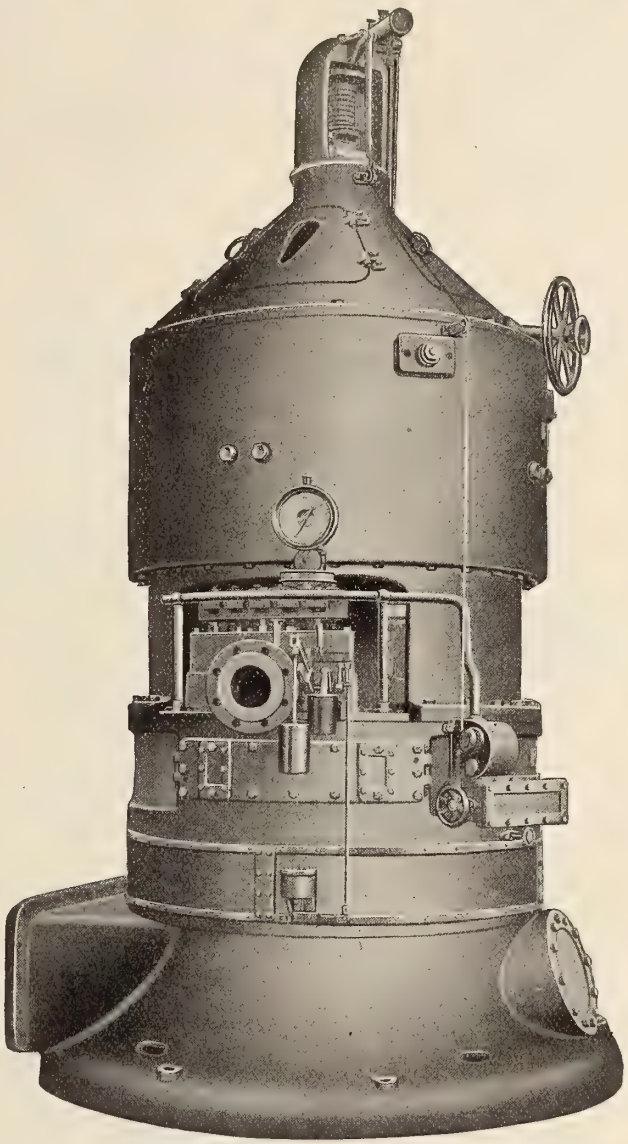
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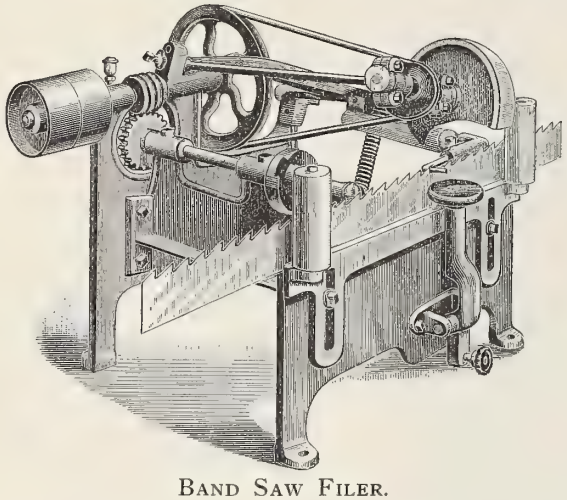
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AUTOMATIC **MADE IN THREE SIZES**

This machine is simple in design and easily operated.

After the teeth of a Band Re-saw have been put into good and uniform shape by the use of this machine, but little attention is needed to maintain them in perfect shape and efficiency.

The sharpening is finished complete and is better than can be done by hand.

The pawl moves the saw to the left at the rate of about 45 teeth to the minute.

The emery wheel moves in and out of each tooth as it passes, grinding either front, throat or back, or all three, as may be deemed necessary.

Cyclone Grinder No. 17

BUILT ON SCIENTIFIC PRINCIPLES

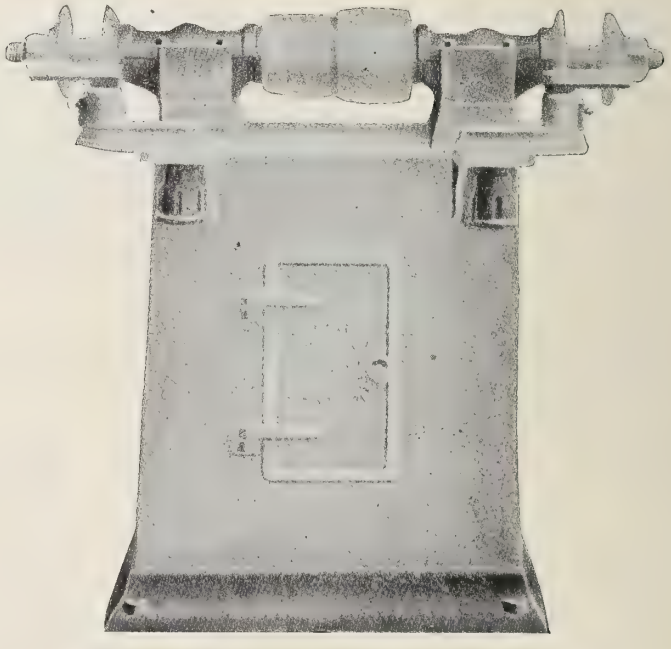
Bearings absolutely DUST PROOF, Automatic Oilers

To carry 2 wheels 12 to 16 in. diameter, 3 in. thick.

Length of crucible steel arbor -	42 inches
Distance between wheels -	30 "
Diameter of arbor between collars -	$1\frac{1}{2}$ "
Size of bearings - - -	8 x 1 9/16 "
Size of cone pulley on arbor -	5 and 6 x $4\frac{1}{2}$ "
Diameter of collars - - -	6 "
Height from floor to centre of arbor -	35 "
Size of base - - - -	23 x 27 "

Countershaft has cone pulleys 15 x 16 x $4\frac{1}{2}$ inches face.

Tight and loose pulley, 8 in. diameter, 5 in. face, and should run about 650 revs. per minute.



CYCLONE GRINDER NO. 17.

CATALOGUES AND PRICES ON APPLICATION

Embossed Metallic Ceiling

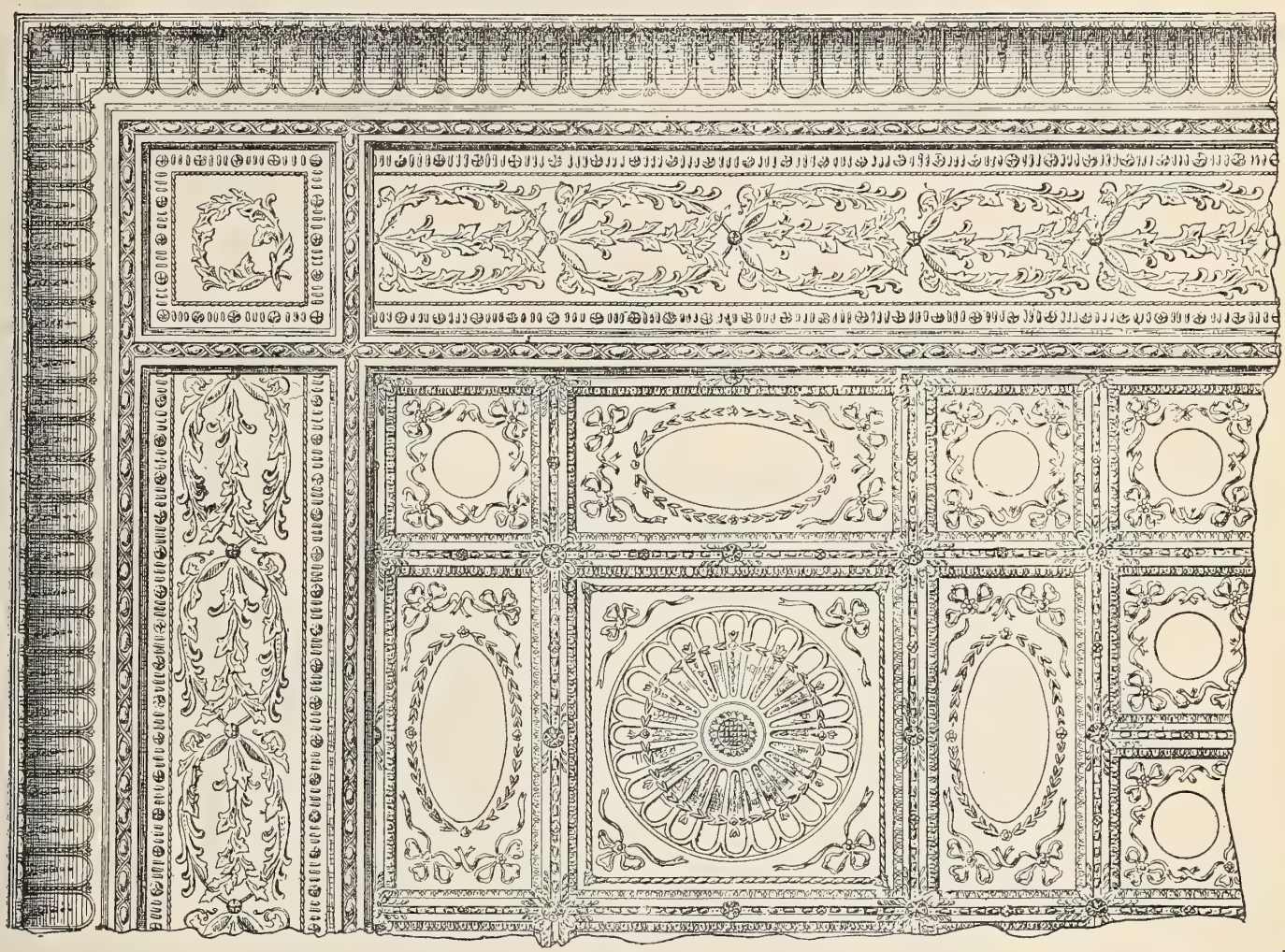


Fig. 3504.

Corner section, showing space 10x13 feet. Composed of "Empire" Plates Nos. 400 and 401, with Centrepiece No. 404; Border No. 804 and Cove Cornice No. 300. A great number of different designs can be arranged with these plates to suit different sized rooms.

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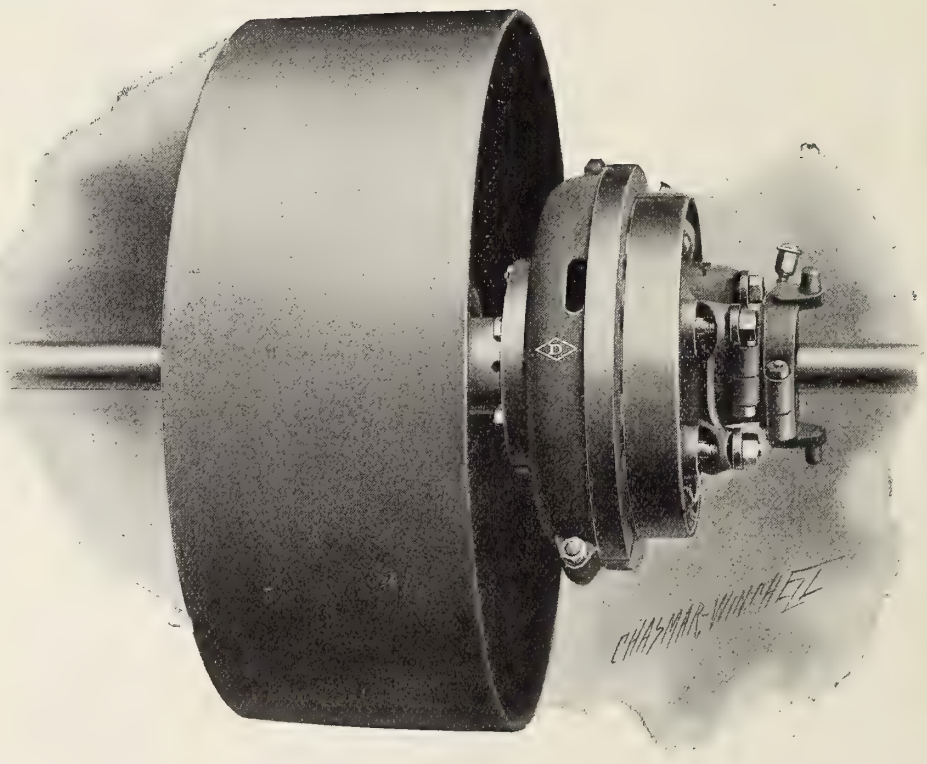
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Quill arrangements for heavy powers our specialty.



All parts interchangeable.

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TURBINE PUMPS

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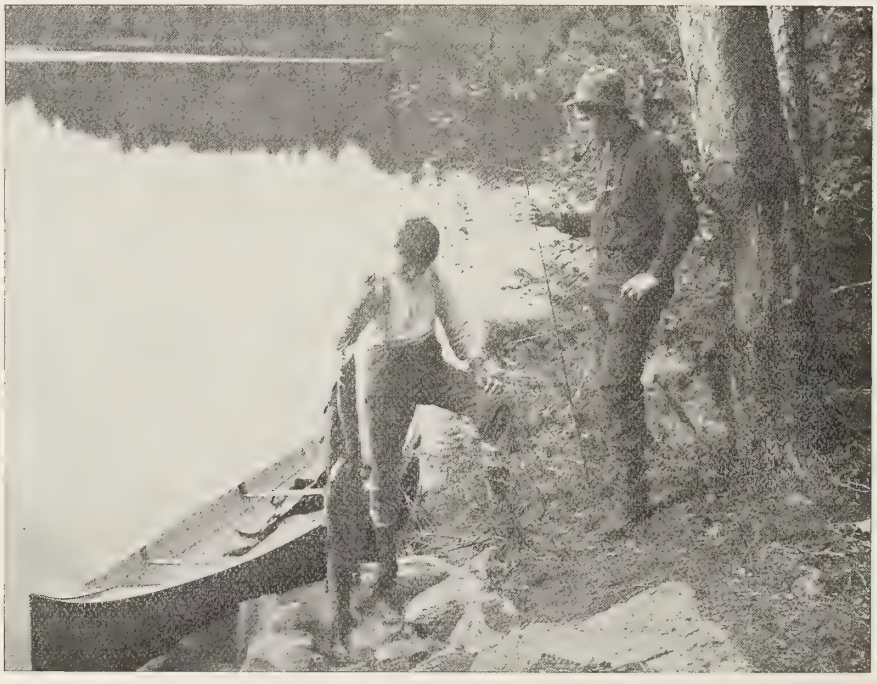
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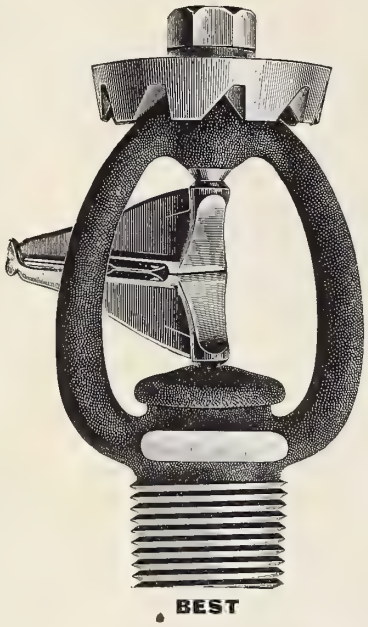
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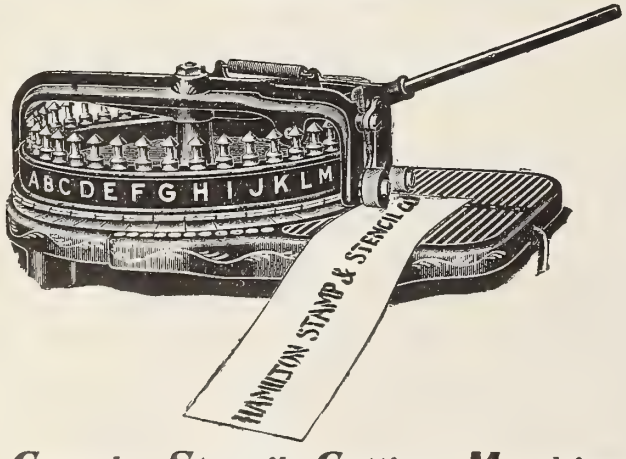
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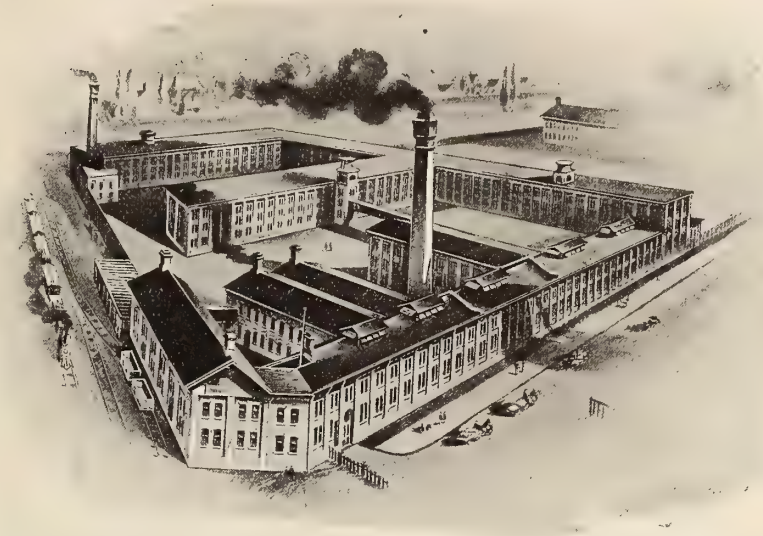
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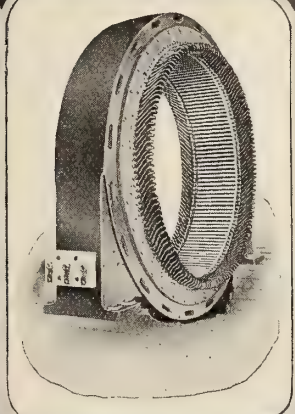
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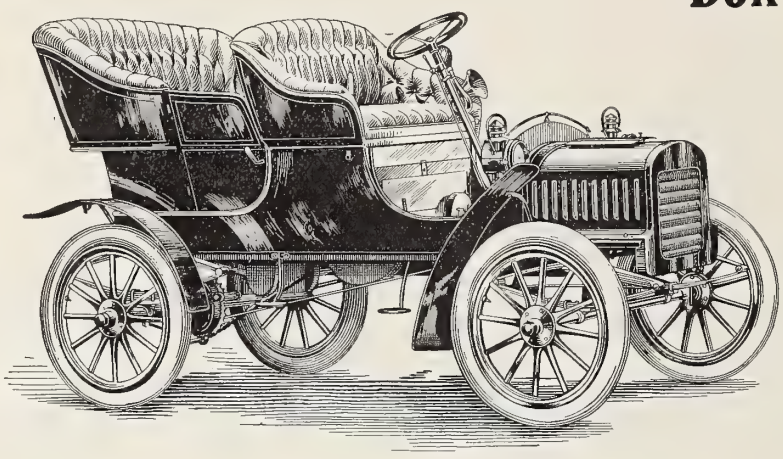


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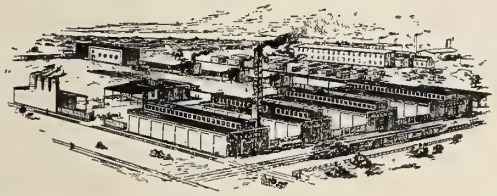
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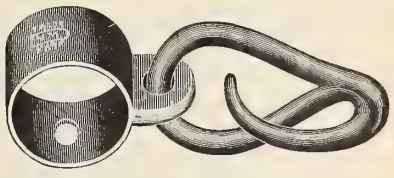
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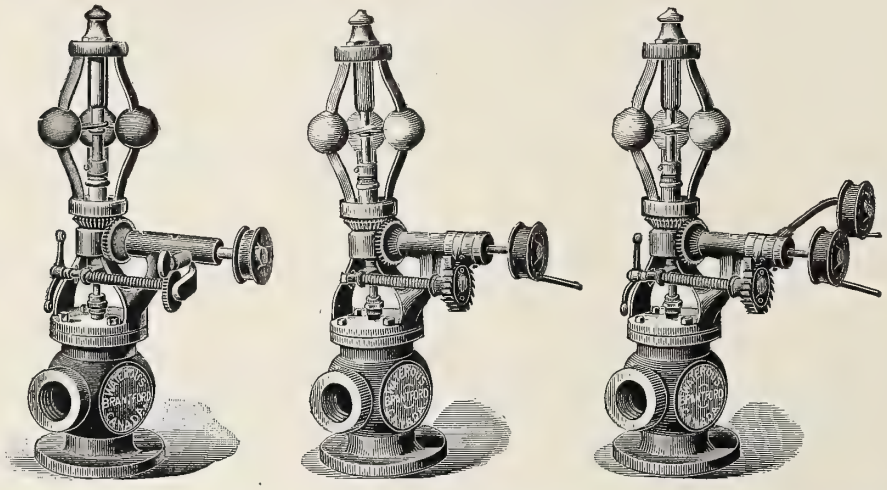
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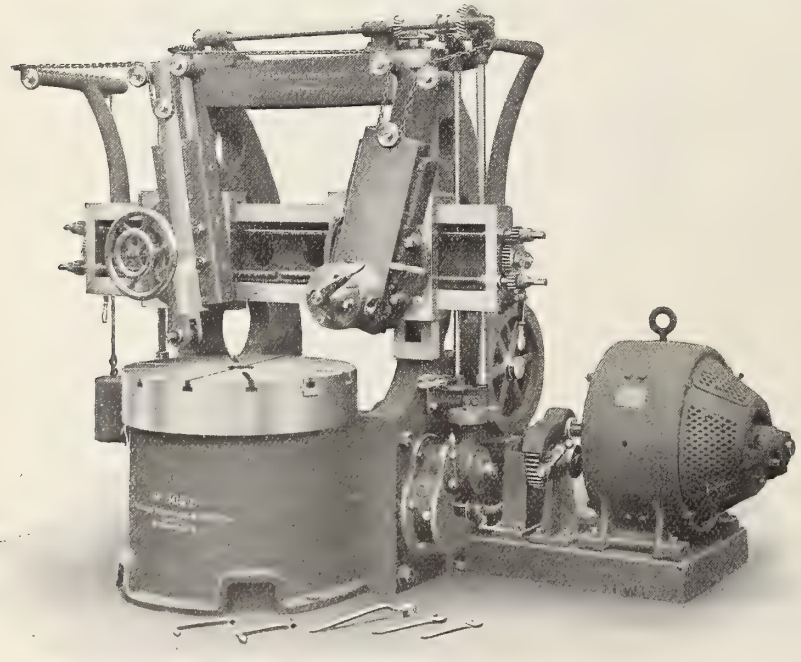
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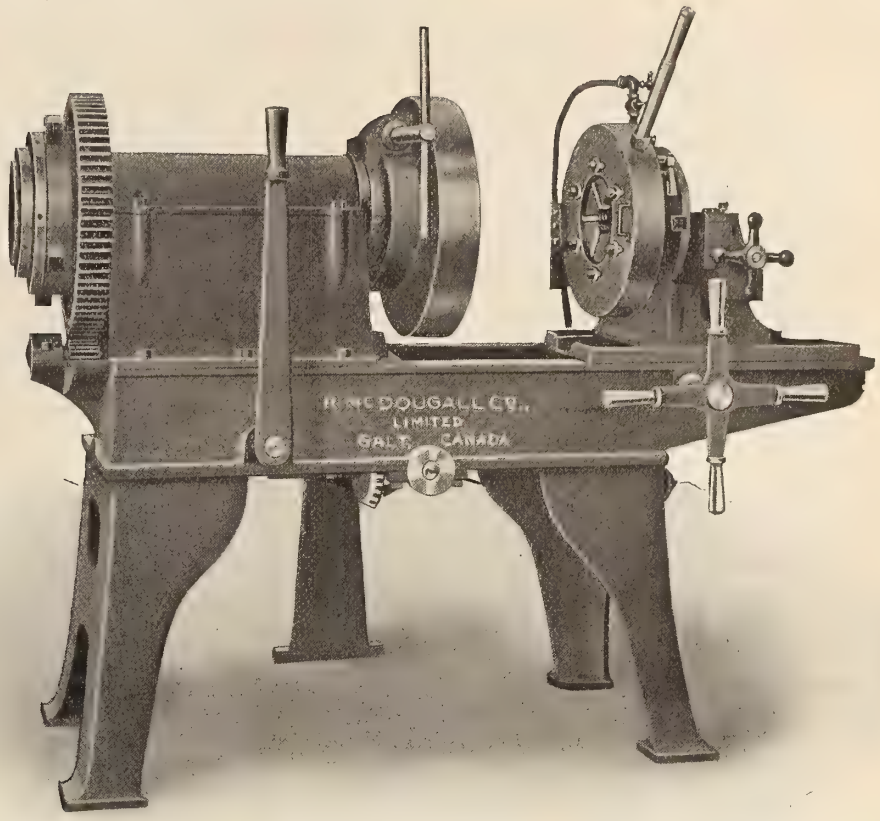
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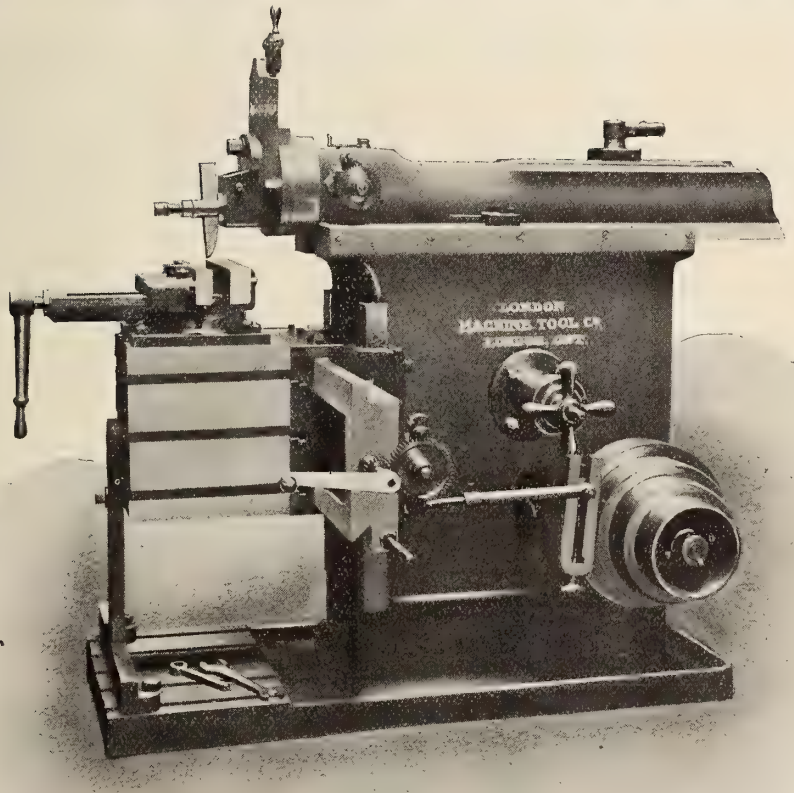
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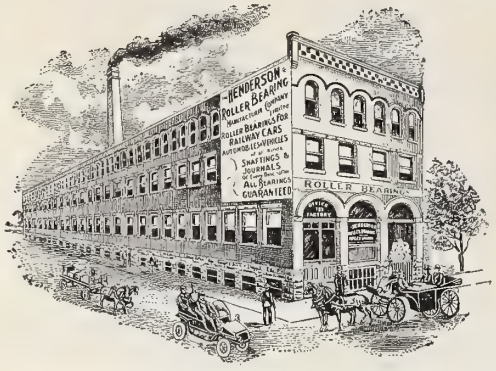
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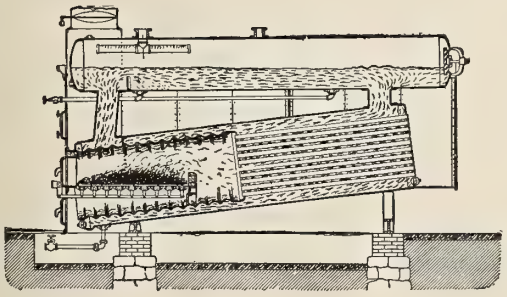
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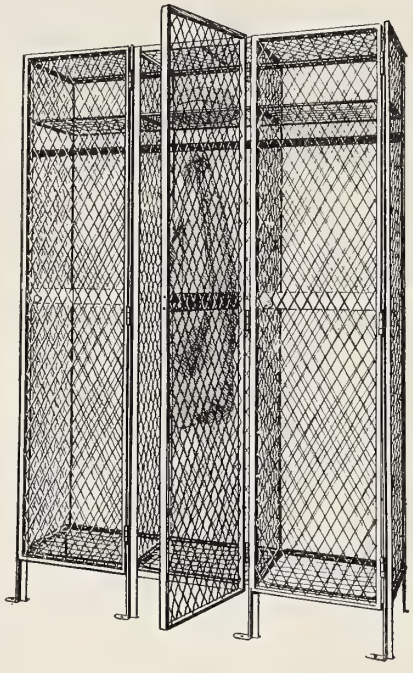
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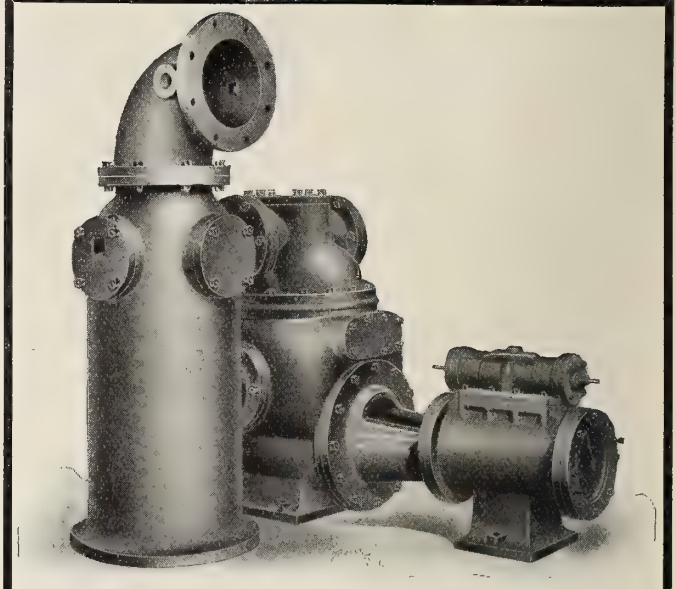
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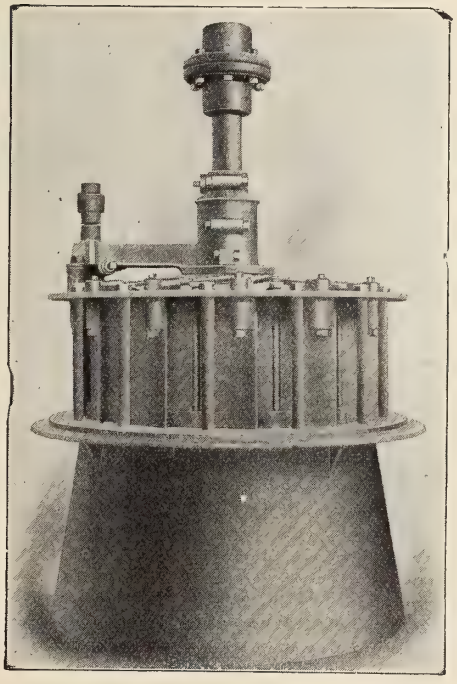
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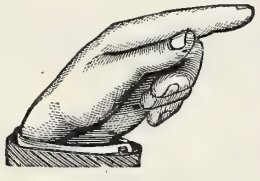
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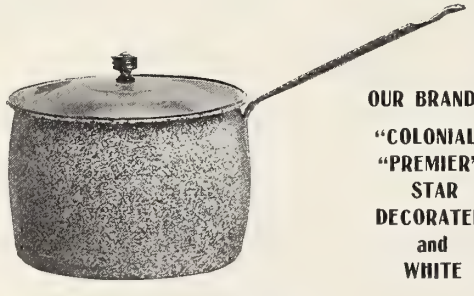


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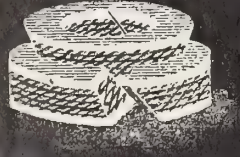
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APRIL, 1905

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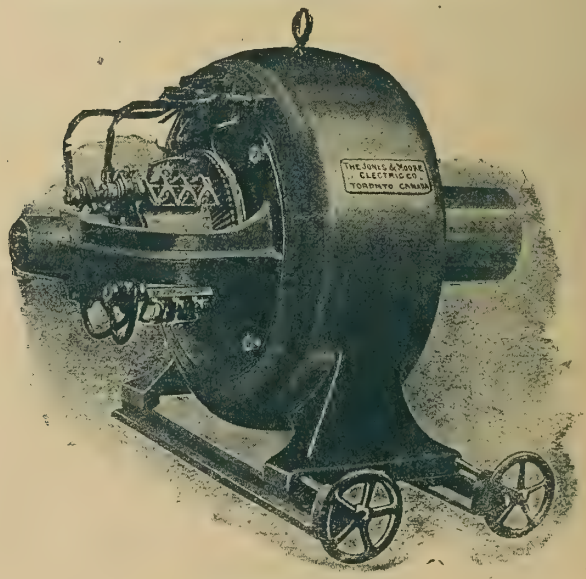
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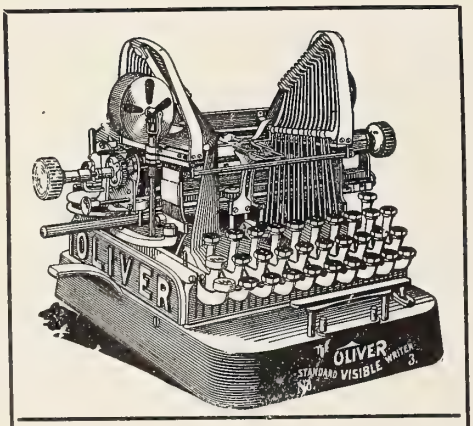
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INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

ADVISORY COMMITTEE.

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Editor, G. M. Murray.

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THE BRITISH EXCURSION.

THE approaching Excursion to Great Britain under the auspices of the Canadian Manufacturers' Association promises to be one of the leading events of the year. Two hundred and forty passengers are already booked, and the party is distinctly representative as it includes manufacturers from every part of the Dominion. The programme being arranged by the London Chamber of Commerce for their reception and entertainment in Great Britain is exceedingly attractive, and Chambers of Commerce in other leading centres are lending their hearty co-operation to make the excursion arrangements a success.

The meeting of Canadian manufacturers with the business men of the Mother Country will surely be followed by beneficial results. The mission of the excursion party is primarily to bring about closer relations between the business men of Great Britain and Canada, and to encourage in the British people a greater knowledge of, and a deeper interest in, the industries of the Dominion. Canada is not yet known in Great Britain as a manufacturing country, and since the Motherland is by far our most important export market, it is important that Canadian industries should be brought prominently before the British public. From a closer knowledge of the opportunities and possibilities awaiting enterprise in Canada, an increased flow of capital and emigration will undoubtedly result, and these are the great needs of the Dominion at the present time.

The manufacturers are not visiting Great Britain with any political object in view. The fiscal problem in Great Britain must be settled by the people of Great Britain themselves, without influence from any outside source. If the excursion can bring about a deeper mutual interest than now exists, and through this added interest, stimulate a more careful study of the greater problems which concern the Empire, as well as intensify the bonds of affection which now hold us together, its mission will surely be fulfilled.

CANADIAN OR IMPORTED, WHICH?

THIS question is being presented every day to the Canadian purchaser. Every day it is being answered, and upon the answer depends, to a considerable extent, the success of Canadian industry, and enterprise. Purchases are being made by our governments, our municipal corporations, our railway companies, our manufacturing industries, and by citizens individually of every class and calling. Each transaction involves a decision upon the same patriotic principle.

It must be said to the credit of our governments, both federal and provincial, that they have, through years of hesitation and apparent indifference, gradually drawn nearer to a recognition of the fact that a patriotic preference for Canadian supplies in every department is a sound policy. Yet even to-day, the public accounts show large expenditures, both directly and indirectly, for goods which are not made in Canada. The tendency, however, is to cut off foreign supplies, and unquestionably this policy, carried out by any of our governments, will meet with the approval of the Canadian people.

Municipal councils also are taking a more pronounced stand upon the question. The recent decision of the governing body of one of our most important cities, to purchase its supply of cement from a United States firm, is viewed with profound regret in that city as well as in every other part of the Dominion.

But if Canadian governments and corporations sometimes err upon this question, we doubt if after all they are more inconsiderate of the claims of Canadian industries, than the average Canadian citizen. Every good citizen, whether he be a statesman, a professional man, a farmer, a workingman, or a manufacturer, is interested in the growth and development of the country, and that growth depends upon the building up of every kind of industry, and the national co-operation of all. We do not believe that manufacturers are guilty of more flagrant violation of the patriotic preference than any other class in Canada, but instances are constantly coming before us where it is quite apparent that scant justice is dealt to their fellow manufacturers, and orders given to foreign firms.

We are informed that a large proportion of the lumber and bricks used in the construction of Canadian factories, now being built, is being imported from the United States. No good reason is being advanced why these supplies cannot be purchased from Canadian sources. We know that a large number of Canadian

manufacturers are using imported office stationery, and are sending across the line each year for their supply of calendars, catalogues and other printed matter. Many orders for machinery of various kinds which might be and is being made in Canada, are being filled for Canadian manufacturers by United States firms. And how many and varied are the kinds of raw material in many industries, which are still being imported, in spite of the fact that they are made at home.

The manufacturers are asking the Canadian public to purchase Canadian goods. It is expected of them that they will at least be consistent, and they have a right to expect this from each other. Manufacturers should be "living examples" to prove how practicable, and how beneficial too, is the principle they advocate, and the preference which they give the products of each other, should be carried into the home as well as the factory. Is it not reasonable to expect that the Canadian who sells the products of his own factory, can do so with greater zeal and clearer conscience if he surrounds himself, through choice, with Canadian-made goods? We would have no hesitation in saying that the manufacturer who sleeps on a Canadian mattress, walks on Canadian carpets, wears Canadian clothes and reaches his desk every morning after a good Canadian breakfast, is doing more for himself, for his industries and for his country than the man who sleeps on imported furniture, uses imported soap in his bath, dons his imported clothes, and walks down to work in imported boots after a breakfast of imported cereals and bacon. Be consistent.

THE HAMILTON CEMENT TRANSACTION.

CONSIDERABLE ill-feeling has been aroused in Hamilton over the awarding of the city cement contract for 1905 to a United States firm.

The disabilities under which the Portland cement industry in Canada has to labor, are too well known to call for more than passing notice. The rigor of the Canadian climate, which makes the steady operation of the mills a matter of difficulty, and the heavy duty and transportation charges on coal, which is consumed in the kilns in immense quantities, are two respects in which the Canadian product is seriously handicapped, as compared with United States cement. Add to these the fact that it is practically excluded from the markets of Eastern and Western Canada owing to the long rail haul (nearly all the plants being located in Central Ontario), the higher freight rates which it is claimed the Canadian mills are called upon to pay even to consuming points in Ontario itself, and above all the enormous capacity of Canadian plants as compared with the country's consumption of cement, and it will readily be seen that the situation is one calling for serious consideration.

If the Canadian producer were guaranteed the market of his home territory, he would no doubt be able to struggle along until such time as the consumption of cement had increased to an extent that would make his undertaking a profitable one. But if, as happened in Hamilton, the United States manufacturer is to be permitted to invade that territory, and, through the slaughtering of prices, to steal the business from his very door, then his position becomes one of extreme gravity.

The action of the Hamilton council in awarding the city contract to a United States firm, has been subjected to criticism on various grounds. We have no sympathy, however, with the suggestion that all United States tenders should have been thrown out simply for the reason that they *were* United States tenders. The advisability of asking for tenders from this source in the first place may be open to criticism, but once they were invited, and submitted in good faith, they were certainly entitled to equal consideration with all other tenders. Nor have we any sympathy with the suggestion that Canadian firms should have had the refusal of supplying the cement at the prices quoted by their foreign competitors. This again would have been a distinct breach of faith, and if regularly adopted, would open the way to all kinds of dishonest practices.

But, while a United States firm made the lowest tender, it does not necessarily follow that they should have been awarded the contract, even though their cement was fully up to specifications. Considerations other than the one of immediate dollars and cents should have been taken into account, especially if, as seems only too apparent, there were evidences of dumping. To reply that sentiment should not be allowed to interfere with business is simply begging the question, for there are those who hold that the granting of the contract to a Canadian firm, even at a slightly higher figure, would have been a much more far-sighted piece of business, so far as the future of the city and the country is concerned.

Of all the cities in Canada, Hamilton should be among the last to forsake our native industries. During the past few years, she has received a goodly share of the branch factories located by United States firms in this country, and even now she is said to be negotiating with others with a view to securing their establishment within her borders. By purchasing her supplies across the line, she is simply encouraging these firms to remain where they are, whereas consistency with her present policy of expansion demands that she should not send one cent out of the country for goods that she can buy at home.

FACTORY COSTS IN LABOR TROUBLES.

IN the negotiations following a strike at the foundry of Warden King & Son, Limited, Montreal, which had been precipitated by the firm undertaking to reduce the wages of two employees in a certain department by 30 per cent., the curious proposition was submitted by the union that they would resume work providing a similar reduction of 30 per cent. were made in the price at which the company offered its manufactured articles to the public.

We refer to this incident not so much for the purpose of calling attention to the absurdity of the union's proposition, which is quite obvious, but because it furnishes a striking illustration of one of the most stubborn difficulties which the employer has to contend with in adjusting disputes with his employees.

The average workman fails utterly to appreciate the expense under which a manufacturing business is conducted. He knows of course that there is material to be bought and productive labor to be paid for, but beyond these he regards other items entering into the cost of production as trivial. Labor and material loom up so largely before him that they entirely overshadow everything else. He does not see things from the office end. He has not the proper perspective. If he had, he would know how large a percentage has to be allowed for power, light, heat, repairs, rent, insurance, office expense, interest on investment, etc. But he knows nothing of this. All he knows is that material costs his employer so much, that labor costs him so much more, and he assumes that the difference between the sum of these two and the market price of the article is, roughly speaking, the manufacturer's profit.

Many a workman, on going to the factory counter to purchase an article which he himself has perhaps helped to make, is amazed at the price which is asked him. He believes that he is being robbed. He has roughly calculated the cost of labor and material, and when he finds that he is asked to pay a sum considerably in advance of what these amount to he jumps to the conclusion that his employer is making enormous profits. The proper proportion which he believes should exist between the price of labor and material on the one hand and the price of the finished article on the other is not being observed. He decides that one of two things should be done—either he should receive a liberal increase in wages or else the market price of the article should be reduced. He has been brought up to believe that fluctuations in the price of material and labor are followed by corresponding fluctuations in the price of the factory product; and vice versa,

he believes that when conditions arise to reduce the market value of the manufactured article so that it becomes necessary for the employer to curtail expenses, the direction in which the practice of economy will first manifest itself will be in the matter of his wages.

If the workmen of our factories were only given an opportunity to examine the cost sheets, and to see the number and size of the amounts therein recorded, their views as to the importance of productive labor relative to other items of expense would receive a rude shock. They would realize that the determination of cost is a more complicated problem than they had supposed; that a great many points besides material and labor are involved in its solution. They would realize that a reduction in wages of 15 per cent. would sometimes mean a reduction in the cost of the finished article of less than 5 per cent., and that to make demands of the kind instanced in Montreal is utterly futile.

And if, moreover, when profits have melted away to almost nothing, workmen could only be made aware of the time and thought which is given by their employers to those same cost sheets, and could but realize the conscientious effort which is made to exhaust every other means of reducing expenditure before touching upon the question of productive labor, they would appreciate as they have never done before the regard which is had for their welfare.

It is important in the interests of both sides to a labor dispute that facts like these should be brought to light, and in this connection the usefulness of arbitration cannot be too greatly emphasized. If gone about in the right spirit, arbitration will clear up all those obscurities which overcloud the question at issue. It will moderate that extremeness of opinion which makes for discord, and, by revealing things in their true light, will lay the foundation for more harmonious relations. The last three arbitrations in the city of Toronto have been eminently successful, and the growing tendency to resort to this method of settling labor difficulties must be a matter of general satisfaction.

CANADIAN COMMERCIAL AGENCIES.

THE marked improvement which has of late been noticeable in the management of affairs pertaining to our commercial agencies abroad is a matter for congratulation. The quickening of interest in the possibilities of this Department of Government administration has led exporters generally to make freer use of it, and their enquiries have furnished the cue whereby the efforts of agents have been directed along lines calculated to secure information of immediate value. In the appointment of new agents there have been instances of an earnest desire to select men who have displayed special qualifications and aptitude for the work, and to shake free from any restraining influence which might tend to make these appointments a means of paying political debts. The recall of Mr. Larke shows a recognition of the principle, so earnestly advocated by this Association, that efficient representation of our commercial interests in foreign centres is impossible without an intimate knowledge of our country's needs and resources. In all of these, as well as in the replacement of the monthly report by the modern weekly bulletin, are to be seen signs of substantial progress, and the application of business principles to the conduct of the Department's affairs.

It is impossible to disguise the fact, however, that there is still room for improvement, and if proof were wanting it could be found in the remarkable results which have followed from the progressive policies laid down for the management of the consular service of Germany and Austria. In these countries not only is the consular service placed on a level where it is beyond the reach of political influence, but appointments are made only after the most careful examination of a candidate's executive ability, and after he has undergone a course of training covering a period of from three to five years. By the offer of large salaries, permanency of position, and systematic promotion some of the nation's most promising and talented young men are induced to make application. These are schooled in different modern languages, in economics, political science, commercial geography, commercial history and commercial law, and are made as widely acquainted as possible with the conditions of production in their own country.

Speaking of a recent class of German graduates, the United States Consul at Berlin writes:—"The new German commercial attachés will be men of thorough education and experience in the manufacture and sale of textile goods, machinery, hardware, and other merchandise. Each will go to his post, if it is a country where English, French, Italian, Spanish or Russian is spoken, with a good working command of the language, and will have a thorough knowledge of the weights, measures and currency in which business transactions are there conducted. If he shows energy and efficiency, and accomplishes results, he will, according to present announced intention, be kept there indefinitely, for the chief merit claimed for the present consular service of Germany is its permanence."

If Canada is to be successful in the struggle for commercial expansion which is now being waged among the nations of the world, she cannot afford to adopt half-hearted measures. She must throw herself into the issue with all her might. The handicap of being one of the last to start in this great race is a serious one, but it is not without its compensations, for it should enable her to avoid some of the pitfalls which have proven so disastrous to her competitors. At the same time she should not fail to profit by the experience of those competitors who have been more successful, and in this connection it behooves our officials to study the methods adopted by progressive European powers. In our unlimited resources and our native industry we possess the two essentials to productive greatness. In the natural course of events we will have a much larger surplus production to dispose of abroad than we have at present. It is of the foremost importance therefore that no opportunity should be lost of improving the facilities we possess for the disposal of our goods in foreign markets.

CORRESPONDENCE COLUMN.

We take pleasure in announcing our intention to establish at once a new Department in INDUSTRIAL CANADA, to be called a Correspondence Column, which will at all times be open to members of the Association for the discussion of matters of general interest. By this means, an opportunity will be afforded those who desire it, of making suggestions, of criticizing, or of laying their views upon important subjects before the Association as a whole, and if the privilege is taken advantage of as freely as we expect it will be, the Department should develop into one of great usefulness.

We do not undertake, of course, to publish everything which may be offered us. We reserve the right to reject communications which we believe to be undesirable. We shall endeavor to see that members do not abuse their privileges, while at the same time we shall endeavor to encourage them to make the fullest possible use of them by the insertion of every contribution which we regard as eligible.

For the guidance of correspondents, the following rules have been laid down:

1. Subjects dealt with must be of general interest.

2. Contributions should not exceed one column in length; the shorter the better.

3. Every letter must be published over the signature of the writer.

4. The Association does not necessarily endorse any of the views contained in letters which may be published.

This Department will be begun next month and all contributions for that issue should be in the hands of the Editor not later than the 25th inst.

Executive Council

MARCH MEETING.

Preparing for the Coming Tariff Revision—230 Passengers Booked for the Great Britain Excursion—Amendments to the Union Label Bill, and Objectionable Features of the Ontario Assessment Act—Membership Continues to Grow Steadily.

The regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Council Chamber, Board of Trade Building, Toronto, on Thursday, March 16, 1905, at 2 p.m.

The President, Mr. W. K. George, presided, and the following other members were present:—Messrs. C. Bermingham, Kingston; Geo. Booth, Toronto; P. H. Burton, Toronto; C. N. Candee, Toronto; H. Cockshutt, Brantford; J. W. Cowan, Toronto; H. W. Fleury, Aurora; Geo. D. Forbes, Hespeler; Wm. M. Garthshore, London; Lloyd Harris, Brantford; R. Hobson, Hamilton; Joseph Horsfall, Montreal; John J. McGill, Montreal; D. T. McIntosh, Toronto; R. McLaughlin, Oshawa; W. K. McNaught, Toronto; Jas. P. Murray, Toronto; J. A. Publow, Hamilton; Carl Riordan, Merritton; Thos. Roden, Toronto; W. R. Rogers, Toronto; T. A. Staunton, Toronto; A. W. Thomas, Toronto; J. O. Thorn, Toronto; W. B. Tindall, Toronto; R. L. Torrance, Guelph; R. C. Wilkins, Montreal.

Communications.

Regrets were received from the following members of the council who were unable to attend:—Messrs. John Hendry, Geo. E. Amyot, R. Crean, J. R. Shaw, A. S. Rogers, C. R. H. Warnock, Jas. Pender, Henry Wright, A. W. White, J. D. Flavelle, Wm. Stone, J. S. McKinnon and J. M. Taylor.

Acknowledgments of letters of condolence forwarded by the council were received from Mrs. J. B. Henderson, of Paris, and Mrs. Octavius Newcombe, of Toronto.

A communication was received from J. H. Hancock, of Galt, asking the co-operation of the Executive Council on behalf of the ladies of the town of Galt in connection with a "Made-in-Canada" exhibit which they propose holding there next June. It was unanimously agreed that the Association should lend the same assistance to this exhibition as has been accorded to others of the same character, and the request to conduct the enterprise under the patronage of the Association was granted with pleasure.

A letter received from Mr. R. H. Alexander, the Chairman of the British Columbia Branch, requested information as to what work was to be undertaken by the Association in connection with the next Dominion Exhibition to be held in New Westminster, B.C., in 1905. Upon motion of Mr. Thorn, seconded by Mr. Birmingham, this matter was left in charge of the special committee who looked after the arrangements for the exhibit of manufactured goods in Winnipeg last year. The committee is composed of Messrs. W. K. McNaught, W. K. George, Geo. Booth, J. O. Thorn, H. Cockshutt and Robt. Munro.

An invitation from the National Metal Trades Association, asking that representatives should be appointed to attend their next annual meeting to be held in Chicago on March 23rd and 24th, was read. On motion of Mr. Thorn, seconded by Mr. Birmingham, the Assistant Secretary was appointed to attend the Convention.

The reports of officers and committees were then received as follows, and with the amendments noted were regularly adopted.

President.

The President reported specially upon the present tariff situation. Undoubtedly the general revision for which the Association had waited so long was now in sight. It was expected that the Government would appoint the Commission at the present session, and the officers and sections of the Association would be available to assist in seeing that none of the varied interests of the manufacturing industries were overlooked and to reconcile where necessary any conflicting interests which might exist.

Secretary.

The Secretary reported a busy month in the Association work. Eighteen different meetings of various kinds had been held since the last meeting of the Executive Council.

The work of the Association at Ottawa in opposing undesirable legislation had been particularly satisfactory. The Union Label Bill had been amended in the House of Commons beyond recognition, and the Association was following its progress carefully before the Senate.

The preliminary arrangements for the next annual meeting were now under way, with every prospect of a successful convention.

The booking list for the British Excursion was now almost complete, 230 passengers representing every Province of the Dominion with the exception of Prince Edward Island having secured reservations.

The special attention of the Executive Council was called to the monthly report of the Insurance Department, and to the success attending the work of the new Secretary in Montreal.

Treasurer.

The report of the Treasurer was presented by Mr. Geo. Booth. It showed the state of the Association finances up till March 1st.

Finance Committee.

The report of the Finance Committee was presented by Mr. J. O. Thorn. It recommended for payment the monthly expenditure of the Association and approved of a special arrangment to facilitate the work of the Insurance Department. It also confirmed the appointment of Mr. W. J. Bulman, of Winnipeg, as Secretary to the Manitoba Branch, to succeed Mr. C. N. Bell, who had resigned. It also contained recommendation that hereafter the officers of the Association should be engaged uniformly at the beginning of the Association year.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented in the absence of the Chairman by Mr. Thos. Roden.

It recommended for acceptance 37 applications for membership, which are published in another column.

The committee reported that the initial arrangements for the next convention to be held in the City of Quebec were now in progress and suggested that the convention should be held on Monday, Tuesday and Wednesday, Sept. 18, 19, and 20.

The committee had, on behalf of the Association, tendered an invitation to His Excellency, the Governor-General, to a banquet to be held in his honor on the occasion of his approaching visit to Toronto. Owing to the fact, however, that the programme for his visit to Toronto was already filled, His Excellency replied with regret that he would be unable to accept the invitation.

The committee also reported that the booking list for the British Excursion was now complete, 230 passengers having been booked through the Association offices, taking up the entire first class accommodation on the vessel. The arrangements for their itinerary in Great Britain were now in progress, and as they matured would be communicated to the excursionists.

The report also recommended that the monthly circular announcing the list of new members should be discontinued.

In addition to the membership applications contained in this issue, a number of additional applications received in the interval

were presented by the Secretary, but it was decided that these should be held over and come before the committee in the regular way.

Industrial Canada Committee.

The report of the Industrial Canada Committee was presented by the Chairman, Mr. A. W. Thomas.

It included a financial statement showing the results from the last issue of the paper. The committee had approved of special articles for succeeding numbers, including the "Markets of Western Canada" and "The Chemical Industries of the Dominion." The latter, as prepared by Prof. W. R. Lang, of the University of Toronto, it was decided to publish in instalments owing to its length.

With a view of making known the executive management of INDUSTRIAL CANADA the committee had decided to publish the names of its officers in the announcement appearing on the editorial page.

Parliamentary Committee.

The report of the Parliamentary Committee in the absence of the Chairman was presented by the Secretary. It reviewed the legislation now before the House of Commons and the Senate at Ottawa in which the members of the Association were interested. The most important of these bills was the Union Label Bill. Before passing the House of Commons the following amendments had been made to the measure as introduced:—

1.—The right to register labels had been limited to unions "duly incorporated."

2.—The clause limiting the right to take action against unions to causes arising under the Act was struck out.

3.—Notice of withdrawal of the right to use the label must be given in writing.

The Bill as amended was now before the Senate and its progress was being closely followed.

It was decided that another enquiry circular with regard to the scarcity of labor among the members of the Association should be issued within a month's time.

The report also contained an account of interviews with the Premier of Ontario and a number of members of his Cabinet with regard to important matters, and also an interview with Mr. J. C. Forman, Assessment Commissioner of Toronto. The most important question dealt with by these deputations was the new Assessment Act. The inquisitorial nature of the demands made upon employers through the Province was strongly objected to by a large number of the members of the Association. These objections were raised not only on account of the disagreeable results which might ensue from supplying such private information, but because of the great difficulty in preparing correct lists and securing the necessary information. These facts received the careful attention of the authorities who had been consulted, and the Prime Minister stated that while it would be impossible to deal with the measure during the present session of Parliament, such grievances would certainly receive attention at the following session when the Act would be amended in such respects as it had been found be to unsatisfactory.

Tariff Committee.

Mr. W. K. McNaught, the Chairman of the Tariff Committee, reported that a meeting of the Committee would be held in the near future to consider the tariff and means of assisting in the forthcoming revision, so that the needs of the various industries might be fully placed before the Commission.

Railway and Transportation Committee.

This report was presented by the Chairman, Mr. H. Cockshutt. It appears in full in another column. At the close of the report the Chairman stated that he was leaving next month for Australia and would be absent from Canada for about five months. During his absence the duties of his office would be fulfilled by the Vice-Chairman, Mr. W. P. Gundy.

Insurance Committee.

The Chairman, Mr. P. H. Burton, presented this report. It is referred to elsewhere in this issue.

Branches.

The reports of the Montreal and Toronto Branches were presented by Messrs. J. J. McGill, Chairman, of Montreal and W. B. Tindall, Vice-Chairman, of Toronto, respectively. These reports are published in another column.

Under the head of new business Mr. McGill suggested that some arrangement might be made to increase the interest of members in districts adjacent to the Association Branches by including them in the Branch territory. He cited the instance of a large number of manufacturers in the eastern townships of Quebec who might advantageously belong to the Montreal Branch. Upon motion of Mr. Birmingham, seconded by Mr. Roden, it was unanimously agreed that the Reception and Membership Committee should correspond with all the City Branches in the Association to ascertain their ideas upon this subject and to make a report at the next meeting of the Executive Council.

The meeting then adjourned.

RAILWAY AND TRANSPORTATION COMMITTEE.

The following matters have been discussed and dealt with during the month:

British Columbia Cedar Rates.

A letter was read from the Secretary of the Board of Railway Commissioners, intimating that the Canadian Pacific Railway have reconsidered their former decision, to apply the order of the Board requiring them to cease from discriminating against cedar only to that portion of its system which is not exempt from the control of the Board in the matter of tolls. The railway now suggest that they amend their tariff to conform to the order by reducing their rates on cedar lumber, but raising them on other wood products so as to get rid of the charge of discriminating. This increase, if permitted, would create a greater cause for complaint than formerly existed. The interested members in British Columbia have been communicated with, and pending their reply action is deferred.

The Committee decided to recommend that the Executive Council urge upon the Dominion Government the necessity of securing a ruling from the Supreme Court as to the application of the Railway Act and the jurisdiction of the Railway Commission on that portion of the Canadian Pacific Railway which is claimed to be exempt under the terms of the original charter.

Rates on Boiler Plate.

The complaint of the Manitoba Iron Works with regard to discrimination in rates on boiler iron was carefully reviewed, and Manager of Transportation instructed to advise complainants of the result of his investigations.

Dominion Millers' Association Complaint.

A copy of the answer made by the railways in this case has been received, and reply on behalf of the Association has been communicated to the Board.

Rates on Stoves.

At the request of the Caloric Club, the Transportation Department has been in communication with the railways regarding restoration of certain commodity rates on stoves, which have been withdrawn. It has been arranged that a committee representing interested railways will meet Manager of Transportation at an early date for the purpose of discussing the matter and, if possible, arranging a final adjustment.

Interchange Switching.

A communication from the Secretary of the Board of Railway Commissioners in connection with this matter has been

received. The Manager of Transportation was requested to make investigations with a view to assisting applicants in securing the desired interchange arrangements.

Other matters of interest were discussed, including cement rates and questions affecting individual interests.

MONTREAL BRANCH.

The regular monthly meeting of the Executive Committee of the Montreal Branch of the Canadian Manufacturers' Association was held on March 9th, with the Chairman, Mr. J. J. McGill, presiding. There were also present:—Messrs. J. H. Burland, O. Faucher, Hon. J. D. Rolland, Geo. Esplin, J. H. Birks and Clarence F. Smith.

The fact that many United States publications crowded with advertisements of United States goods are being distributed through the Canadian mails without the Dominion Government receiving any recompense therefrom, and to the prejudice of Canadian manufacturing interests, was again brought up. It was decided to draw the attention of the Parliamentary Committee to the matter.

In connection with the Union Label Bill, the Chairman reported that there was no truth in the rumor that the Montreal Board of Trade had withdrawn its opposition to the measure. It was decided that strong efforts should be made to have the Bill defeated in the Senate, and the members of the Montreal Branch were urged to see that the Montreal Senators oppose the Bill on its presentation.

The Secretary reported that Ald. Ames, M.P., had a motion before the Montreal City Council to strike off the tax on electric motors and gas engines. The members of the Branch were asked to use their influence in securing the support of the aldermen for the motion.

A resolution of sympathy with the family of the late Mr. R. C. Jamieson was passed.

The Committee was pleased to learn that the Transportation Department was making representations at Ottawa to have space reserved for Canadian shippers on steamship lines subsidized by the Canadian Government.

Mr. E. P. Heaton, the Association's insurance expert, was present, and reported briefly regarding the work of his Department. A number of instances were cited to show how assistance had been rendered to members of the Association. It was suggested that the approval of the Executive Council should be obtained to appoint the members of the Insurance Committee resident in Montreal a local Advisory Committee to confer with the Insurance Manager on his visits to Montreal.

Seventeen applications for membership were passed.

TORONTO BRANCH.

The regular meeting of the Toronto Branch was held on March 9th. There were present:—Messrs. Richard A. Donald (Chairman), J. P. Murray, Robt. Crean, Geo. C. Gale, S. R. Hart, John S. McKinnon, C. B. Lowndes, P. H. Burton and J. O. Thorn.

A number of important matters were discussed, the following of which are of interest:

The Chairman and Secretary were appointed to represent the Branch at a Convention of the National Municipal League to be held in New York on April 25th to 28th next.

The Branch decided to give several books on scientific subjects as prizes to the different classes at the Toronto Technical School.

Thirteen new members were recommended for acceptance.

The Secretary and Chairman reported having had an interview with Mr. Robt. McCallum regarding the Smoke By-law, and also with His Worship, the Mayor, regarding exemption from taxation on machinery. Both interviews had been satisfactory.

It was decided that the members of the Branch should be given notice of an invitation that had been received from the Insurance Institute to be present at a lecture given on the 13th inst., by Mr. J. B. Laidlaw on "Lessons to be learned from the Conflagration."

The Secretary reported that a date had been set by the Prime Minister to receive a deputation at which opportunity would be taken to put before him the necessity for amending the Act respecting Pawnbrokers.

The Secretary was instructed to communicate with the City Engineer and ascertain what steps would be taken to put in force the $700,000 Fire Protection By-law passed in January last.

37 NEW MEMBERS.

Passed by the Executive Council, March 16th, 1905.

Brantford, Ont.

COCKSHUTT PLOW COMPANY, LIMITED.—(Harvey W. Cockshutt, 3rd Member).

Hamilton, Ont.

DOMINION VINEGAR WORKS OF HAMILTON.—Vinegar.
GURNEY SCALE COMPANY.—(John C. Gauld, 2nd Member).
SAWYER & MASSEY COMPANY, LIMITED.—(Thos. S. Depew, 3rd Member).

Montreal, Que.

CANADA CAR COMPANY, LIMITED.—Railway Cars, Street Cars, Car Wheels, Castings, etc.
CANADA MAPLE EXCHANGE.—Maple Syrup and Sugar.
CANADIAN ASBESTOS COMPANY.—Asbestos Goods.
CANADIAN CARBONATE COMPANY.—Liquid Gas, Calcined Magnesite.
EAVES & LAVALLEE.—Jewellery.
HILL ELECTRIC SWITCH COMPANY, LIMITED, THE.—Switch Boards, Knife Switches, Panel Boards, etc.
KNIT-TO-FIT MANUFACTURING COMPANY, THE.—Underwear, Sweaters, Knitted Goods.
JOHN LOVELL & SON, LIMITED.—Books, Publications.
LANG MANUFACTURING COMPANY, THE.—Biscuits and Confectionery.
MONTREAL BLANKET COMPANY, THE.—Wool Shoddies, Upholstering, Flocks.
MONTREAL STENCIL WORKS.—Steel Dies, Stencils, Brass Signs, Badges, Checks, Seals, Rubber Stamps.
MONTREAL TERRA COTTA LUMBER COMPANY, THE.—Terra Cotta Fireproofing.
TEES & COMPANY.—Office Furniture, Desks, etc.
WALKER & CAMPBELL.—Engravers, Stencils, Rubber Stamps, Brass Signs.
WOLOWITCH, B.—Hats and Caps.

Mount Forest, Ont.

HALSTED, J. A.—Lumber and Hoops.

Orillia, Ont.

STANDARD METER COMPANY, LIMITED.—Gas Meters.

Ottawa, Ont.

OTTAWA GAS COMPANY.—Gas and Steel Stands for Cooking Stoves.

Peterborough, Ont.

KENNEDY, H. P.—Abattoir.

Smith's Falls, Ont.

FROST & WOOD COMPANY, LIMITED.—(Thos. MacFarlane, 2nd Member).

St. Hyacinthe, Ont.

THE ST. HYACINTHE DISTILLERY PACKING & VINEGAR COMPANY, LIMITED.—Alcohols and Vinegars.

Toronto, Ont.

BEATTY MANUFACTURING COMPANY, LIMITED.—Children's Goods.
THE GRAHAM NAIL WORKS.—(L. N. Vanstone, 2nd Member).
GRAND & TOY, LIMITED.—Office Supplies.
HEINTZMAN & COMPANY, LIMITED.—(Herman Heintzman, 2nd Member).

Toronto, Ont.—(*Cont.*)

Marshall Sanitary Mattress Company.—(R. S. Wilson, 2nd Member).

The Metallic Roofing Company of Canada, Limited.—(Sigmund Samuel, 3rd Member).

New Davis Dental Manufacturing Company, Limited.—Dental Supplies.

The Polson Iron Works Company, Limited.—(Dr. W. P. Thomson, 2nd Member).

Toronto Laundry Machine Company.—Laundry Machines.

The Toronto Pharmacal Company, Limited.—Pharmaceuticals, etc.

The United Arts and Crafts.—(W. R. Wadsworth, 2nd Member).

Windsor, Ont.

J. T. Wing & Company.—Babbit Metal, etc.

CANADA'S CHANGE OF ATTITUDE

Mr. Watson Griffin's Address on The Death of Reciprocity. Illustrated by Sam Hunter.

THE address on The Death of Reciprocity delivered by Mr. Watson Griffin at the Halifax banquet of the Canadian Industrial League has been illustrated by Mr. Sam Hunter, the well-known artist. Mr. Griffin's address with Mr. Hunter's illustrations follows:—

An Englishman who visited Canada first in 1887 and again in 1904 said that wherever he went in 1887 he found a general desire for reciprocity with the United States although there was a difference of opinion as to how much Canada could afford to pay for a treaty, but on the occasion of his second visit he only met one advocate of reciprocity in all his travels, and that was a distinguished citizen of Toronto, Professor Goldwin Smith.

Undoubtedly there has been an extraordinary change in public sentiment on this question, and an explanation for it might be found by comparing the map of Canada which appeared in Mr. Goldwin Smith's "Handbook of Commercial Union," with the map of the Dominion in any Canadian school geography. Mr. Goldwin Smith's map represented habitable Canada as a mere fringe along the northern border of the United States, and that was the prevailing notion in those days when Canada was sometimes described as a country having length without breadth. But the Dominion has gradually broadened out or rather the minds of Canadians have broadened to a knowledge of its greatness, and when Sir Wilfred Laurier declares that Canada is to be the country of the twentieth century just as the United States was the country of the nineteenth century he but voices the general belief of the Canadian people. So when Uncle Sam comes forward with the old worn-out nag called Reciprocity saying, "You used to be very anxious for a trade and I thought you would gladly make a deal whenever I got ready," Jack Canuck looks proudly at the horse he rides and replies: "You are too late. We did not think then that our horse would be the winner of the twentieth century, but we do now."

Even the *Toronto Globe*, which was at one time the leading advocate of unrestricted reciprocity has come out flat against a reciprocity treaty. On the 12th of January, 1905, the *Globe*, referring to a report that the Joint High Commission would soon resume its sittings, said: "If our neighbors only knew how languid Canadian interest in the whole subject really is they would see little hope of securing any commercial treaty of any sort just now." The concluding words of this article are significant. "There is a growing prejudice in Canada," says that great Liberal newspaper, "against tying our hands by trade agreements with either Great Britain or the United States. We are free and we prefer to remain so."

That is the general feeling of Canadians. We must be free to change our tariff as we please whenever changing conditions may demand a change.

However, in an article published January 14, the *Globe* said that while a long term treaty would be unpopular in Canada a reciprocity convention which could be terminated at short notice by either Canada or the United States would be more favorably regarded. Such conventional reciprocity as the *Globe* proposes would be like a tight rope connecting Canada with the United States, held down on one side by Jack Canuck and on the other by Uncle Sam. The Canadian farmer who tried to make use of the Reciprocity tight rope as a bridge to the United States market would find it at best rather risky, and if Uncle Sam should suddenly let go his end of the rope, where would the poor Canadian farmer be?

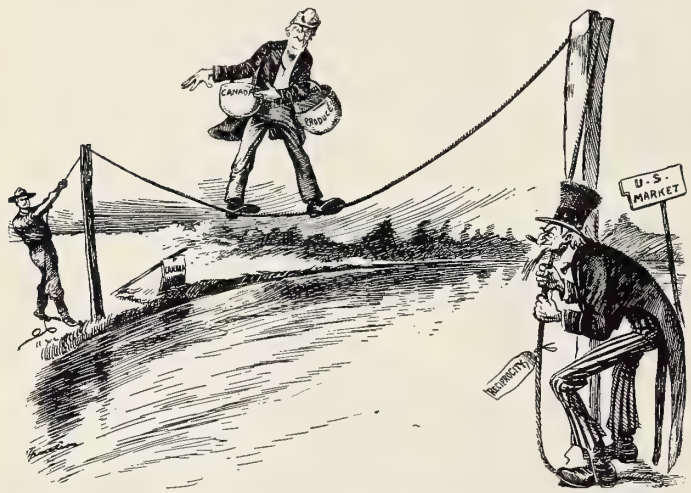


Uncle Sam—You used to be very anxious for a trade and I thought you would gladly make a deal whenever I got ready.

Jack Canuck—You are too late, Uncle. We did not think then that our horse would be the winner of the twentieth century, but we do now.

The *Globe's* proposal may be answered by quoting from an interview of E. W. Thompson with Hon. Clifford Sifton, in which the Minister of the Interior is reported to have said: "We could not afford to risk much on a market that might be hastily closed to us. Canadians have not forgotten the lesson of 1866, when Washington abrogated the reciprocity treaty of 1854. This country had got into the way of adapting its production, and very largely its entire business, to the American market. Canada was flattened out for years by the abrogation of the treaty. No more of that for me. We have adapted our production and business to the independent self-sufficient policy that has been pursued for many years now. Does anybody of good sense imagine that we will give that up, and undertake a re-adaptation to the United States market on a bargain extending over any short term, or which could be done away with by a few years' notice from Washington. No."

It must be remembered that when the Reciprocity Treaty was made the provinces which now form the Dominion had not been confederated. They had no interests in common and no general policy. Ontario and Quebec, then known as Upper and Lower Canada were separated from the Maritime Provinces by a wilderness with no railway connections between them. The northern part of Ontario was an unknown country, and to the



If Uncle Sam should suddenly let go his end of the Reciprocity tight rope, where would the poor Canadian farmer be?

north-west of it lay the great lone land called the Hudson Bay Territory. West of that again and separated from it by the Rocky Mountains was the British Columbia colony on the Pacific Coast. All these scattered British colonies had close connection with the United States. For thirty years from 1824 to 1854 the United States had enjoyed the benefits of a protective policy. Fostered by protection prosperous industries had grown up in every town and city in the United States, creating a home market of immense value to farmers. But the British North American provinces had very low revenue tariffs. Consequently while the villages and towns of the United States were rapidly growing into populous and prosperous cities the provincial towns were stagnant, and many thousands of young people were forced to emigrate to the United States to secure work. The farmers of the provinces had enjoyed a preference in the British market which partly compensated them for the lack of a home market, but when this preference was withdrawn the outlook for the colonies seemed very black indeed. It is not surprising that seeing the high prices of farm products prevailing in the manufacturing cities of the United States most of our farmers desired free entrance into that market.

By a peculiar combination of circumstances very prosperous times followed the adoption of the Reciprocity Treaty. The Crimean War suddenly raised the price of wheat to two dollars per bushel and the prices of nearly all farm products went up accordingly. However in 1857 there was a severe commercial crisis and several bad years followed. Then came the Civil War, during which the farming districts of the Southern States, which in time of peace have always sent great quantities of produce to the big cities of the North, ceased entirely to supply these markets, while at the same time a large proportion of the Northern farmers were fighting instead of tilling the soil. Consequently everything the Canadian farmer could produce sold readily in the United States market at high prices. The war also created a great demand for horses. Another important factor in the making of prosperity during the years of the Reciprocity Treaty was the enormous expenditure of money on railway building in the two Canadas and the Maritime Provinces. Many millions of dollars of British capital were thus put into general circulation in the provinces and helped to make times good.

One remarkable result of the Reciprocity Treaty was the sudden falling off in shipping at St. Lawrence ports. The tonnage of sea-going vessels arriving and departing at the four leading St. Lawrence ports in 1854 was 1,487,097 tons; in 1855 it was only 870,794 tons. The total value of the exports and imports at the ports of Montreal and Quebec in 1854 was about $42,000,000; in 1855 it was only about $28,000,000.

It must be remembered that the treaty only provided for reciprocity in natural products. In 1858 the Canadian Government decided to give a preference to manufacturers and a protective tariff of twenty per cent. was imposed on a long list of manufactures, while boots and shoes, harness and ready made clothing got protection to the extent of twenty-five per cent. Thus, during the last eight years of the Reciprocity Treaty we had in the old provinces of Upper and Lower Canada protection for manufactures and free trade in natural products. The fact that the customs tariff was doubled on a number of lines of manufactures during the period of the Reciprocity Treaty has been generally overlooked. As a result of this protection a number of manufacturing industries were established furnishing a home market for farmers and greatly increasing the prosperity of the country. Notwithstanding all these peculiarly favorable conditions the balance of trade was against Canada during the period of reciprocity. Yet prices were so good and business so profitable during the greater part of that period that the Canadian people for many years looked back to it with longing for a renewal of the treaty, overlooking entirely the unusual conditions that existed between 1854 and 1866. But Canadians no longer look backward. We have our faces toward the future; we turn our eyes to the east, the west, the north, but not to the south, unless it be to the farther south where in the British West Indies and the countries of Africa and South America our Maritime Provinces will ultimately do a great trade. Canada's proximity to the United States is no longer considered the only geographical fact worth mentioning. Note the remarkable way in which it juts out into the two great oceans; mark the numerous good harbors on both the Atlantic and Pacific Coasts with unlimited quantities of good coal close to them. Is it for nothing that Canada is hundreds of miles nearer to both Europe and Asia than the United States? Is it for nothing that Halifax is six hundred miles nearer Liverpool than New York is? Is it for nothing that the great coal and iron districts of this province are not only nearer to Europe but also much nearer to Africa and South America than any coal and iron district of the United States? The answer is plainly marked on the map in Nature's own language. Canada was not intended to be a mere fringe of the United States; it was intended to do an immense business through its own harbors with countries over seas. But so long as the bulk of our outside trade is done with the United States, so long as one Canadian buys as much from the United States as thirty-four Americans buy from Canada our maritime trade must be limited and our magnificent harbors will remain almost unused.

Insurance Department

EXTRACTS FROM REPORT OF THE INSURANCE COMMITTEE TO THE EXECUTIVE COUNCIL, THURSDAY, MARCH 16, 1905.

The work of the Department since its organization has closely followed the lines laid down in the first circular and, as foreshadowed in the report presented at the last meeting of the Executive Council, our time has been fully occupied in responding to the calls made upon us along those lines.

The following resume of the work performed for our members, up to Thursday, March 9th, will give some idea of the character and scope of the operations of the Department:—

(1) We have reported upon the financial standing of the companies insuring the plants of three members carrying an aggregate insurance of $215,000.

(2) We have examined and reported upon the policies of insurance covering the plants of six members, carrying an aggregate insurance of $737,500.

(3) We have inspected the premises of eleven of our members with an aggregate insurance of $697,075.

(4) We have adjusted for one member a loss arising from the partial destruction of the plant, involving a payment by the companies of about $11,000.

Policies Deficient in their Protection to the Assured.

In no less than eleven instances, the forms under which the insurances were carried, failed to cover all the property the assured intended to have covered. In these cases new forms were drawn up by the Department to properly protect the assured.

In nearly every case that has come under our notice, the forms were deficient in failing to grant to the assured necessary privileges to overcome vexatious and burdensome limitations prescribed in the printed conditions of the policies of the various companies. It is safe to say that this particular feature is rarely recognized by the assured, and almost as seldom by those charged with the duty of preparing the policy wordings.

Effect of the Co-Insurance Clause in Policies.

Owing to the very general adoption of the Co-Insurance clause in insurance policies the Department has, in every case, where such condition was applicable, had to give consideration to the relation that clause bore to the *"actual cash value"* of the property insured. In six cases that have been before us, it was manifest that in the event of a fire, the insured would have suffered by the application of the clause in question, and in each of these cases, additional insurance was effected by the insured to properly safeguard them. With the largely increased cost of building materials and labor, our members generally should give this important branch of the subject more particular and careful attention than has been their wont.

Sprinklered Risks in United States (unlicensed) Companies.

Reference was made in the last report to large establishments eligible for insurance in the New England Mutuals. We have now to report that in one case the company has decided to retain its insurance in Canadian companies, having received a concession in rate which practically reduces their insurance premium to one-half that paid last year.

Since the date of our last report, the Department has been commissioned by members whose entire insurance, amounting to $580,000, is placed in New England Mutuals or other United States companies, to arrange with the Canadian licensed companies for such concessions as will lead to the return of this business to this side of the line. The disposition of the Canadian companies is becoming much more favorable to risks thoroughly protected with automatic sprinklers, and doubtless the effort to be made by this Department to secure the return of the risks referred to, will be responded to in a liberal spirit by the licensed companies.

The desirability of obtaining from our members an accurate statement of the amount of business that is now placed by them in the New England Mutuals and other kindred associations, is becoming daily more apparent, and it is the intention of the Committee to collect this information from those members who have not yet furnished information on the subject. It is hoped that the response will be general and complete. It is certain that our members are insuring in this class of company to the extent of many millions of dollars, and it is equally certain that a large part of this could be brought back to the licensed companies by mutual concessions. We believe we shall have the cordial support of all concerned in making this a predominant feature of our work for some time to come.

Improvements in Members' Risks.

The risks inspected during the last month have not readily lent themselves to such improvements as would call for reduced rates, except in two of our larger risks where the installation of a sprinkler system would have the desired effect. The Department has therefore urged in both cases, the immediate adoption of this means of fire protection, and both members are now taking steps to obtain plans and estimates with a view to its installation.

The Committee is of the opinion that the Department has met with sufficient success to justify the continuance of the policy they are pursuing, and they feel sure that in due time, and in the natural order of things, other lines of activity and usefulness will open up.

Some Practical Results of the Department.

The following are a few of the instances in which the Department has been of practical service to members, and which were not referred to particularly, or in detail, in the Committee's report. The information is now recorded for the benefit of the members.

Member's No. in our Register.	Amount of Insurance Carried.	Premium paid 1904-05.	Premium paid 1905-06.	Remarks.
94	$ 16,000	$ 518.40	$ 312.00	Improvements made at slight expense.
468	17,500	420.00	260.00	Risk re-arranged.
774	165,000	990.00	495.00	Rate cut in two by tariff companies.
693	29,500	893.85	843.85	Improvements now being made which will entitle assured to a further reduction of premium of $53.
749	175,000	3,174.50	3,004.00	Risk re-arranged.
1096	47,600	1,404.68	1,320.98	Risk re-arranged.
542	110,000	440.00	330.00	Rate reduced 25 % by tariff companies.

A PROTEST AGAINST THE METRIC SYSTEM.

BY

SAMUEL S. DALE.

In discussing the metric system it is necessary to distinguish clearly between the measurement of value and of material objects. Currency is used to measure value, that fluctuating and almost indefinable quality due to supply and demand. This involves counting, adding, subtracting, multiplying and dividing exclusively, and is largely a matter of bookkeeping, for which the decimal base of our system of notation is best adapted. Measuring the length, area, cubic capacity and weight of material objects is a very different process, involving manual operations, for which the standards must be adapted to the objects to be measured. Measuring the cubic contents of a pile of wood and measuring the market value of that wood are two distinct operations, involving the use of wholly dissimilar standards. The government establishes the standard for money and the people must accept it because no other is a legal tender. The power of the government to establish weights and measures, however, is restricted to comparatively narrow limits, outside of which the people not only can, but often must defy its authority. Broadly speaking, the people accept the currency established by the government, while the government accepts the weights and measures established by the people. The solution of the problems arising with one offers no guide for solving those presented by the other.

The Metric Prophets.

Prophecy is the main support of the metric cause and is offered with such a show of authority as to carry conviction to that large number who let others think for them. In this role of the prophet, college professors and teachers are the most dangerous offenders. The child is told by his teacher that the metric is bound to come and so he believes it. This process of moulding the minds of the school children has been going on for thirty-five years in the public schools of the United States.

The result is that at present the vast majority of the metric advocates, young and old, have no better reason for the faith that is in them than that educators say the metric system is a good thing and that its coming is inevitable. All are infused if not inspired with the spirit of prophecy, from the child who knows the metric system is coming because "my teacher says so," to the Chattanooga coffin manufacturer who believes that "we must all come to it eventually."

Nor is prophecy confined to the bare prediction of its coming. Time, place and manner are specified with an emphasis and minuteness of detail that to many are irresistible. Thus the noble British lord before the Committee on Coinage, Weights and Measures at Washington on April 24, 1902, predicted that "we will find it coming suddenly in England," and that the inconvenience of changing from the inch to the metric system will not last more than "a fortnight or a week," while the business manager of a Massachusetts textile mill prophesied before the same Committee on February 6, 1902, that the metric system could be "adopted" by both the Government and the 80,000,000 inhabitants of the United States in two years, say on July 1, 1904.

Prophecy is a source of error as fruitful as it is unnecessary. To accept it unsupported is to invite delusions. It deserves consideration only when backed by a weight of evidence that makes it not prophecy, but a statement of natural consequences. Nothing should be accepted on faith. The burden of proof in this metric discussion rests upon the supporters of the metric system. They ask us to give up our English weights and measures with which we have grown to be the richest and most powerful race on earth. Then let them prove that the change from the old to the new system is possible, and that the superiority of the new system will more than compensate us for the change. So far they have failed utterly to produce this proof.



FILIPINOS ON THE MANILA DOCKS.

Weighing Merchandise for Export by the Spanish System of Weights.

The Confession of a Frenchman.

They point to a long list of countries, beginning with France, as proof of the ease with which the change can be made. The evidence, however, shows that no country has ever made the metric system its single standard in the sense that the English system is the standard of the English-speaking race. In France the people are still using their pre-Revolutionary units. Today, one hundred and fifteen years after the introduction of the metric system, the standard of one of the primary industries of France are in a state of chaos. A French manufacturer thus describes it:

Paul Lamoitiere, l'Industrie Textile, Paris, October, 1902:

"It (a new law) would put a stop to the chaos which the Americans ridicule. . . . It is not pleasant to be thus continually ridiculed by foreigners, especially when they have reason for doing so. . . .

"After having established the metric system, is it not truly ridiculous that more than one hundred and ten years later we should be still using the English yard, the old or French pound, the denier of Montpellier or of Milan, the ancient aune, the many different skeins, etc? . . .

"And this is the reason why they are right in mocking us when they say we do not use the metric system for numbering yarn and for weaving calculations. . . . It is nonsense and a derision. Note also that while I speak here only of France, I could say as much for all Europe. . . .

"In face of foreign sarcasm it (the metric system) should be established at the earliest possible moment."

In Germany a like condition exists. The arbitrary system of government to which the people there are accustomed and to which English-speaking people are strangers, has forced the metric system into the stores and market places, but for industrial purposes the old units remain in use without a sign of yielding. The result is that goods are manufactured by the old standards and sold by the new, with the resulting confusion. The failure to make the metric system the standard of Germany in thirty-four years or of France in one hundred and fifteen years cannot be concealed. It is admitted.

A Striking Contrast.

If the attempt begun more than a century ago has failed in France, a still greater failure awaits it in English-speaking America now. There the conditions were all favorable to success; here all are adverse. There manufacturing was carried on by hand and foot power in the household; here steam, water and electricity drive the machinery of a vast factory system. There weights and measures were comparatively unimportant; now the success of every process of manufacturing depends upon their accurate adjustment. There diversity made unification imperative; here uniformity forbids disturbance. Then a change of all things became a national fetish; now English-speaking Americans are justly proud of and unwilling to change any of their basic institutions. Then not a mile of railway was in France; now there are 230,000 miles in Canada and the United States. Then France was but nine-tenths the size of Ontario; now Canada and the United States have an area thirty-five times that of France. Then France had a population of but 26,000,000; now Canada and the United States have a population of 90,000,000. There the population has increased 12,000,000 in 110 years; here it is increasing at the rate of 15,000,000 in 10 years. There the new weights and measures were forced on a people accustomed to arbitrary laws; here the people govern themselves and are quick to resent the interference of the police power in their private affairs. If the attempt has failed there, how can it succeed here?

Metric Only in Name.

Bad as is the condition in France and Germany the metric system is at its best there. The claim that it is in general use in other countries where it has been introduced is the most hollow of shams. Governments may use it for official business, but it has made little progress among the people. This is illustrated by the condition in the Philippines. In 1849 it was made the official Spanish system, with the object of thus making it the popular system. After the lapse of fifty-five years it is to-day what it was when the decree was signed, an official system and practically nothing more. Proof of this is overwhelming. The accompanying photograph, taken a year ago on the wharf at Manila in the very shadow of the custom house where the metric system is the only official standard of weight allowed, shows a group of Filipinos weighing mats of sugar by the old Spanish *arroba*, which can be seen plainly marked on the scales. The scene is typical of Philippine conditions. The old Spanish system is the customary standard of the archipelago. It is the single standard for all the natural products of the country. It is the system in which the Filipino thinks. To a slight extent trade has introduced other standards, such as Chinese, Hindoo, and English, while the government practice for fifty-five years has injected the metric system in spots. This scene is worth volumes of unsupported assertions that the metric system is used in the Philippines. It shows just what we might expect and represents the conditions in nearly all so-called metric countries.

A General Revolution.

Nor is the failure to eradicate the old weights and measures difficult to explain. Ideas of size and weight are the earliest to be imprinted on the human mind, and throughout life the standards of weight and measure are found necessary for every occupation. They are fixed in the dimensions of all tools and industrial products, and become a part of the language. To change established standards like the English for others that, like the metric are incommensurable, is a problem so vast and intricate that the human mind cannot comprehend it. It involves a general readjustment of values, for we naturally use round numbers, and a change to metric weight or measure gives impracticable fractions. Milk at eight cents a quart is 8 448-1000 cents per liter. Is the price to be raised or lowered? Hay at $15 per ton (2,000 pounds) is $16.53 per metric ton. Is the farmer to receive more or less? A tariff rate on wire nails is three-fifths of one cent per pound, equal to 1.3227 cents per kilogram. Is the tariff to be raised or lowered? A passenger fare on a railroad is two cents per mile, equal to 1.242 cents per kilometer. Will the rate be increased or decreased? A manufacturer is paying nine cents per yard for weaving cloth, equal to 9 837-1000 cents per meter. Are wages to be raised or lowered? The screw threads on all steam, gas and water pipe above and below the ground, now based on the English inch, will not fit the new metric thread. How are they to be changed? No wonder, when referring to a change of standards in all arts and industries, Napoleon exclaimed: "It frightens the reason."

In the light of the metric failure in other countries and of the inherent and infinite difficulty of the task, a change of the English system of weights and measures now established in the British Empire, the United States and Russia, must be stamped as everlastingly impossible.

The Continental Chaos.

Although a complete change is impossible, it is a comparatively easy matter for a new system of weights and measures to be introduced into a country by official coercion. The resulting use of two sets of incommensurable standards causes a confusion that beggars description, but which is seen in Continental Europe. There it causes a blind staggering between incommensurable units, endless errors, clouding of ideas of size and weight, and loss of time, which are faintly reflected in the following statement of a simplified method of estimating the manufacturing cost of cloth in Germany at the present time:

"The raw material is purchased by the *English pound*. The finished goods are sold by the *French meter*. The yarn counts are *English*, while the length and width of the finished goods are *metric*. The length of the yarn is expressed in *meters*, while the counts are *English* based upon the *yard* and the *pound*. From this hodgepodge, the weight of the yarn is calculated in *grams*, which is extended by another arithmetical somersault at a price given in marks per *English pound*, and to cap the climax the total length of the yarn in *meters* is reduced to *English yards* and then to *English* skeins of 560 *yards* each!"

Too Much for the Turks.

The metricites assert that no country that has introduced the metric system has ever shown any signs of returning to the old system. This is disproved by Turkey. The experience with the metric system in Constantinople under that government, probably as arbitrary as any on earth, is thus stated by Ch. Ed. Guillaume, of the Bureau International des Poids et Mesures:

"A law of 1866 made the metric system compulsory in Constantinople after five years. As a consequence the old measures were confiscated and destroyed in the capitol. No attempt was made to introduce the new system into the provinces. Even at Constantinople the old standards have appeared little by little, and notwithstanding an energetic campaign in favor of the metric system, the Council of State, recognizing that it was impossible to use force, have authorized anew the use of the old Turkish system. Therefore, at present the use of the two systems is permissible."

Changing to Standard Time.

The change to standard time some years ago is often cited as proof of the ease with which our weights and measures can be changed, but it has no bearing on the question. Measuring time cannot be compared with measuring material objects. Moreover, the change referred to was merely a change of the point at which the measurement of the time of day began. The system of measuring was unchanged. A change of the time system itself was a part of the original metric system, but was abandoned after a

few years in France. In histories of the French Revolution we still meet the evidence of that metric failure in the form of such incomprehensible expressions as "1 nivose," instead of "December 21."

Counting the Cost.

The estimates as to the cost of changing the system in certain industries make the metric proposition still more absurd. On this point I will quote the following expert evidence from the manifesto of the British Weights and Measures Association:

"Mr. Tannett-Walker, of Messrs. Tannett-Walker & Co., hydraulic engineers, Leeds, says that on a very low estimate it would cost his firm £10 to £15 per man employed to introduce the meter measures. Dr. Coleman Sellers, of the firm of Wm. Sellers & Co., machine makers, Philadelphia, puts the cost to his firm at $200 per man employed. Mr. McFarland, vice-president of the Westinghouse Electric and Manufacturing Co., estimates that it would cost their Pittsburg works alone $650,000 to make the change. According to calculations made on behalf of the Franklin Institute, than which it is claimed there is no higher scientific authority in the United States, in a well regulated machine shop, thoroughly prepared for doing miscellaneous work, employing 250 workmen, the cost of a new outfit adapted to metric measures would be $150 to $600 per man. A low estimate of the cost of the change to British engineers would be £100,000,000; while Mr. Towne, of the Yale and Towne Mfg. Co., says $1,000,000,000 would not pay American manufacturers for the cost of the change."

The Metric Fallacy in Foreign Trade.

It is claimed that the metric system is necessary in foreign trade. Foreign trade depends upon the quality and price of the goods and on the tariff imposed. The standards of weight or measure by which the goods have been produced is in most cases a secondary consideration. When it is necessary exporters can reduce the English weights and measures to any foreign equivalent desired, whether it be metric, Chinese or what not, just as the French and Germans find it necessary to reduce the weight and measure of a large part of their exported goods to English standards. This may cause inconvenience in the counting house, but it is preferable to attempting the impossible change of weights and measures throughout the country. With the metric system we should still be compelled to reduce weights and measures to the standards of other countries. The following testimony from metric sources shows how the French and Belgians are forced to conform to British standards:

Ferdinand Roy, Congress International pour l'Unification du Numerotage des Fils, Paris, 1900: "In certain of our French colonies the metric system has not been introduced. It is necessary to proceed gradually and at first to mark the number of meters beside the yards, and the metric beside the English numbers."

Baron Esnault-Pelterie, same occasion: "This difficulty (in foreign trade) has been solved in France, since we export to the Far East our cloths folded by the yard, although the metric is the legal system in France."

Boucher-Feyerick, same occasion: "We Belgians export enormous quantities of linen yarn to England, Asia and Egypt, and we cannot adopt the metric system without risking the loss of this trade. Our customers in the countries named are familiar with the English system of numbering, and if we do not give it to them our competitors will and we shall lose the market. I speak not alone for myself, but for all Belgian spinners. We cannot change."

The Metric System is Permissive.

Moreover, the use of the metric system has been permissive in Great Britain, Canada and the United States for many years, and any manufacturer or exporter can use that system who thinks it would be to his advantage. The whole foreign trade argument was admirably summed up by Hon. Gerald Balfour when replying to Sir T. Dewar in the House of Commons a few weeks ago:

"Of the total value of the oversea trade of this country in 1903, 42 per cent., or less than one-half, was conducted with the countries in which the metric system is in force. I do not see my way at present to propose a measure for the compulsory adoption of the metric system in this country, but I may remind my honorable friend that the use of the metric system was legalized for all purposes some years ago, and that it is therefore open to any person trading with foreign countries to make use of it."

Moreover, in most of the countries included to make the 42 per cent. the metric system is but an official sham. This is illustrated by the trade of the Philippines, where 75 per cent. of the exports consist of hemp, bought and sold on the plantations and in the island markets by the old Spanish *arroba* and *picul*. This weight is then reduced to the metric system for assessing the export duty, and then 95 per cent. of the hemp is shipped to England and the United States to be sold and spun by the English yard-pound. Thus the metric system in the Philippines, as in most so-called metric countries, is simply a bureaucratic obstruction to business.

The textile schedules of the Chinese tariff show the general use of the English standards. Of fifty-three textile items, the rate for three of them is based on the Chinese catty (1⅓ pounds); for five the rate is ad valorem; while on all the other forty-five the duty is levied by the English yard, inch or pound. The Japanese tariff tells a similar story. The fact is that as far as foreign trade is concerned we should keep our old English weights and measures.

Calculations.

The simplicity in calculations claimed for the metric system is overestimated. In practice the English units are divided decimally when necessary, thus giving the advantage of decimals without the disadvantage of being tied to them exclusively. Examples can be given where the decimal divisions of the metric system offer an advantage in calculations; in other cases the vulgar fractions of the English system are more convenient.

The metricites tell us that their system is so simple that it can be mastered in a few days or at most in a few weeks, but they fail to prove their claim by mastering the system themselves. Thus R. P. Williams, of the Society of Chemical Teachers, confesses in School Science that: "Even among scientists who use it (the metric system) exclusively, there is much ignorance outside their special field. The chemist who knows milligrams and liters as he knows his own name has but a vague idea of hectares and steres." The resemblance of the metric names and the repetition of the decimal divisions make the metric tables extremely difficult to understand and remember.

Correlation of Units.

The metric system possesses the advantage of a correlation between the units of length, capacity and weight, one cubic decimeter of distilled water being the weight of a kilogram and the cubic capacity of a liter. These relations are not exact, as the standard kilogram at Paris has been found to be inaccurate, but they are close enough for all practical purposes and are an advantage in many cases, particularly in chemical laboratories. It must not be forgotten that the English system also offers convenient ratios between length, capacity and weight. A cubic foot of distilled water weighs 1,000 ounces very nearly, and consequently a ton of 2,000 pounds of water occupies 32 cubic feet; the British Imperial gallon is equal to 10 pounds of water. While for the solution of chemical problems these correlations of the English units are not as convenient as those of the metric, they are not to be despised.

Fine Measurements.

The claim that the metric system is better adapted for fine measurements is unsound. Both the meter and the inch are arbitrary standards and theoretically one is as well adapted for measuring as the other. Practically the inch is preferred by many engineers. Thus Henry R. Towne, of the Yale and Towne Mfg. Co., states:

"The millimeter being approximately four one-hundredths of an inch in length is four times bigger than the hundredth of an inch, and the next subdivision which you can use as a division of the millimeter is four times bigger than the thousandth of an inch. The millimeter is not as convenient a measure in fine work as the inch."

The Centigrade thermometer which is generally offered as a companion piece to the metric system is inferior to the Fahrenheit. First, the Centigrade degrees are too large for the accuracy necessary in many kinds of work; 1° Centigrade being equal to 1.8° Fahrenheit. The Centigrade zero point is so high that it necessitates using "degrees above" and "degrees below," much more frequently to express ordinary conditions of temperature. The complicated calculation of average temperature for plus and minus degrees is more frequently required with the Centigrade system.

Scientists and the People.

It does not follow that the people must use the metric system because scientists have done so. While it is desirable to have the same weights and measures in the laboratory and the workshop, it is not essential. Latin is still the language of science, but as a language of a people, is dead. If uniformity of weights and measures in scientific and popular practice is sought, it can be reached with the least disturbance by changing the methods of the few to conform with those of the many.

It is often said that the metric system would affect a saving of one to three years in the school life of every child. This claim is made ridiculous by the fact that, according to the schedule of the schools of New York City, less than seven weeks out of the eight years of school life are occupied with the study of compound numbers, weights and measures.

The Stability of Standards.

Another claim is that the metric system is more stable because the metal standards at Paris are of a better form and alloy. There has never been a metric standard at Paris that was not of doubtful accuracy. The first one, the earth, was abandoned as too large and irregular in form; the old meter of the archives, an end standard, was rendered useless by wear; new ones made in 1875 were condemned for impurities in the metal; while the standards of 1889 were based on the worn out meter of the archives; finally the standards of 1875 and 1889 were mixed together and distributed by lot to various countries. On the other hand, the English standards are in the custody of the most conservative Bureau of Standards on earth, that of the British Government, at London. The same bar has served for comparison for more than fifty years. A new set of British standards, of iridio-platinum, the most permanent alloy known, has recently been made by the British Government. Duplicates should be placed in the capitol of every English-speaking country and regularly verified by comparison with the prototypes at London. We have no reason to question the methods of caring for the British standards. If an immutable standard is ever found in Nature it will serve for the English system as well as for the metric.

What is Uniformity of Weights and Measures?

We are told by the metricites that the metric system is uniform, while the English system is not. What do they mean by uniformity? Do they refer to the division of the standards, to the names of the units, to the objects measured, to the time during which the system has been used, to the area over which it prevails, or to the number of people by whom it is used? For some of these purposes uniformity is desirable, while for others it is very objectionable.

(a) The metric units are obtained through a uniform division or multiplication by 10. This fails to give the units which all human experience has proved to be the best, such as the yard, foot and inch, approximations of which are found in every natural system of weights and measures. Dividing the meter, 40 inches, by 10, the foot is lost and we get the decimeter, 4 inches, for which there is little use. Dividing the decimeter by 10, the inch is lost and we get the centimeter, 4-10 inch. Multiplying the meter successively by 10 we get the dekameter and hektometer, which are not used, the kilometer, ⅝ mile, and the myriameter, which is useless.

The case is worse when we come to the metric units of area, for which the constant factor is 100 instead of 10. From the square decimeter (16 square inches) there is a jump to a square meter (1,550 square inches), which is one hundred times as large. Still worse are the units of cubic capacity, which are obtained by the constant factor 1000, giving for example, the cubic decimeter (61 cubic inches) and next the cubic meter equal to 61,000 cubic inches.

In Conflict with Nature.

To get the units suitable for the varied wants of man, the divisions must be irregular as in the English system, where the inch is successively multiplied by 12, 3 and 1760 to get the foot, yard, and mile. Each of these units may be divided in any way that is most convenient, by 10 or by any other number. The exclusively decimal divisions of the metric system are in conflict with the natural operations of the mind which divides things by successive halving. To get one-half with decimals we must first divide by 10 and take five of these parts; to get one-fifth we take two of them; to get one-quarter we first divide by 100 and then take twenty-five of the parts; to get one-eighth we divide by 1000 and take one hundred and twenty-five of the parts; and it is utterly impossible to express one-third, one-sixth, one-seventh, or one-ninth by the metric or decimal system.

The people of no country have ever used or can ever use an exclusively decimal scale of weights and measures. The French and Germans divide the kilogram into halves and call one of them a pound, which they again divide into halves and quarters. The Germans divide the kilogram into two hundred parts and call one of them a *loth*. These illustrations, which can be extended indefinitely, prove that our English units obtained by irregular divisions are necessary for human wants. The metricites answer that the metric units can be divided irregularly if necessary. Then what is the use of changing our weights and measures?

It is true that the English system is not as uniform in this respect as is desirable. We have the troy, avoirdupois, and apothecaries' weights, two gallons, two tons and other variations. The remedy for this diversity is to be found in the elimination of units and not in an increase of their number. We have, for example, two tons. The metricites would give us one more by adding the metric ton, whereas we need one less. Moreover, the very persistence of variations, such as the long ton, stamps the metric proposition as absurd. If these minor irregularities cannot be removed, how can the entire English system be abolished?

The Uniformity of Confusion.

(b) The names of the metric system are uniform. They indicate by Greek and Latin prefixes the multiple or division of the base unit. This method, for example, gives: millimeter, centimeter, decimeter, dekameter, hektometer, kilometer, myriameter. These names are so long and so much alike as to be impracticable and confusing. The French and Germans do not, cannot use them; they abbreviate them or use letters instead. The system is unnatural. Mankind needs short names, easily recognized. The outward resemblance of diverse things always causes confusion. The superiority of the English expressions is seen at a glance; inch, foot, yard, mile, grain, ounce and pound. Short, crisp expressions, each different in sound and appearance from the others.

The metric combination of Greek and Latin names with the constant decimal scale gives some curious results. The cubic decimeter is equal to 61 cubic inches, and the cubic decameter is 61,000,000 cubic inches. In other words, a cubic decimeter, a cube 4 inches high, by the change of a letter becomes a cube 33 feet high. The metric names were adopted by Robespierre at the height of the Reign of Terror. Even the scientific theorists who invented the metric system condemned them.

The World's Work by Each System.

(c) As to the desirable uniformity in respect to the objects measured it is more difficult to make comparisons. A fair basis is found by setting Australia, Canada, Russia, the United Kingdom and the United States, in which the inch is the basic standard, against Austria, France, Germany, Italy, Norway, Sweden

and Switzerland, where the meter is used. With this classification the daily energy of the people in foot tons is 301,350 millions for the English system and 131,750 millions for the metric. Rated by wealth in pounds sterling, the English countries have 31,770 millions; the metric, 22,960 millions. Of manufactures, the English system is credited with 2,719 millions sterling annually; the metric, 1,543 millions.

English Evolution and French Revolution.

(d) Again the English system is superior as to the time in which it has been used. It was developed in the British Isles by a process of evolution that antedates history. It was brought to America by the earliest English settlers, and as far as Canada and the United States are concerned, is practically the only system they have ever had. It was carried to Russia by the ship carpenters taken there in 1698 by Peter the Great, and was coincident with the introduction of Russia to civilization. On the other hand, the metric system made its first appearance in France in 1790, and was adopted by Germany in 1870. Its career as a single standard for any people is yet to begin.

Encircling the Globe.

(e) The English system is superior as regards the uniformity of place. The area of the British Empire and the United States is 15,469,054 square miles, including the best part of the earth; with Russia, 24,129,449 square miles. That of France and the German Empire with their colonies is 3,458,830 square miles, much of which is a desert. Throughout the rest of the earth a mixture of weights and measures is used, in which the English system possesses an increasing lead over all others.

(f) As to the desirable uniformity in respect to persons the English system is again far in the lead. In fact, it is the only system used as a single standard by any people. Excluding the natives of India and other colonies it is the single standard for 140,000,000 people in the British Empire and the United States, while 140,000,000 people in Russia use a linear system based on the English inch. The metric system can offer nothing to approach this. Including subject races we find 600,000,000 people in the British Empire, Russia and the United States where the English inch is the basic linear standard, while 125,000,000 are under the control of French and German-speaking Europe.

A Warning Against Change.

Summing up the question we find all English uniformity desirable; all metric uniformity undesirable. When asked to give up the English system and accept the metric, let the answer of Canada and the United States be the reply of John Quincy Adams to the same request eighty years ago, changing his words to conform to the altered conditions of to-day:

That neither country (Great Britain nor the United States) has yet changed its law (regarding weights and measures)[1] is perhaps a most fortunate circumstance, in reference to the principle of uniformity, for both. If this report were authorized to speak to both nations, as it is required to speak to the legislature of one of them, on a subject in which the object of pursuit is the same for both and the interest in it common to both, it would say—Is your object uniformity? Then before you change any part of your system, such as it is, compare the uniformity you must lose with the uniformity you may gain by the alteration. At this hour sixty millions of Britons, who in the next generation may be one hundred, and ninety millions of Americans in Canada and the United States have the same legal system of weights and measures. Their mile, acre, yard, foot and inch—their bushel of wheat, their pound avoirdupois, and their pound troy, their cord of wood and their ton of shipping are the same. They are of the nations of the earth the two that have with each other the most of that intercourse which requires the constant use of weights and measures. Any change whatever in the system of the one, which would not be adopted by the other, would destroy all this existing uniformity. Precious, indeed, must be that uniformity, the mere promise of which, obtained by an alteration of the law, would more than compensate for the abandonment of this.

Injecting the Metric Virus.

The introduction of the metric system is not opposed from a fear that we may lose the English standards, for that is impossible, but from a knowledge based on the experience of every country into which the metric system has been forced, that a mixture of incommensurable standards means chaos. If any one wants to use the metric standards they can legally do so. Further legislation means force to establish the metric system and suppress the English. The possibility of enacting such laws arises from the indifference of the great mass of people who would be most affected, and by the activity of the very few metric theorists who carry a vast weight of authority—college presidents, professors and scientists, especially the scientists who occupy official positions. Educated and plausible, they carry weight with unthinking politicians. At Washington they swarm through the government bureaus and lobbies of the Capitol, and get the ear of cabinet officers to exalt the metric system and vilify the English. Until within two years they had been unopposed. In 1893 one of them, T. C. Mendenhall, then Superintendent of Weights and Measures, actually went so far as to discard the yard bar given to the United States by Great Britain as a standard, and issue an order that the yard should be "derived from the meter," a task absurdly impossible. The same bureaucratic order contained the following sentence:

"Such action (deriving the yard from the meter) will also have the great advantage of putting us (the United States) in direct relation in our weights and measures with all civilized nations."

Thus did this bureaucrat raise the United States to civilization and leave the British Empire in barbarism. To allay suspicion he added: "The practical effect on our customary weights and measures is, of course, nothing."

The employees of that United States Government bureau have since been industriously trying to measure a yard with a meter stick, and weigh a pound by a kilogram, but with indifferent success. This nonsensical order was given that the metricites might pretend that the United States had adopted the metric system. How well it has been so used to support the metric cause in England is shown by the following:

Lord Belhaven and Stenton, vice-president of the Decimal Association, in *Electrical Engineer*, London, Dec. 23, 1904: "Is it generally known that America has so far departed from the British system of weights and measures as to adopt the meter as the fundamental standard of length, the yard being derived from such standard meter?"

E. Johnson, secretary of the Decimal Association, in *Electrical Engineer*, London, Jan. 6, 1905: "Within the last few years the United States have adopted a ton of 2,000 pounds, and have adopted a yard derived from the meter. This will show whether present day business needs tend in the direction of decimalized weights and measures, in harmony with our universal scale of notation, or not."

The Remedy.

The danger to our weights and measures lies in the indifference to such methods as these. The remedy is found in fair discussion which, as has been abundantly proved in the last two years, the metric cause cannot stand. Three years ago the Committee on Coinage, Weights and Measures of the United States House of Representatives, reported a compulsory metric bill favorably by a vote of 16 to 2. To-day in the same committee, the same measure has but one supporter. The cause of the change? Discussion, which has shown that in the matter of weights and measures English-speaking countries are objects of envy to the rest of the world.

Boston, Mass., March 18, 1905.

There is on exhibition in the office of the Canadian Manufacturers' Association an ingot of the first refined copper produced in Canada. It is from the works of the Montreal Copper Company, Limited, who now have an eight ton plant in constant operation. Their copper is remarkably pure, averaging in the neighborhood of 99.75 per cent. Most of their output finds a market in foreign countries, the home consumption being as yet comparatively small.

THE CHEMICAL INDUSTRIES OF THE DOMINION, 1905.

BY

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(Continued from last month.)

III.—The Manufacture of Leather.

The manufacture of leather has, during the last thirty years, occupied quite a prominent position in Ontario and Quebec, and, during the past few years, through the stimulus from a larger home market and increasing sales to foreign markets, has grown greatly. As compared with a decade ago the value of the leather produced in the country may safely be said to have doubled. There are from 18 to 20 large establishments in operation and fully 50 small ones. No tanning is done in the North-West Territories, and practically none in British Columbia. Bark, chrome and combination tanning methods are employed, the spent bark being utilized in large establishments in specially constructed furnaces. Though the United States may be said to lead the world in the extent of leather produced, the quality of the Canadian product is not surpassed. The Canadian specialties are hemlock sole and harness, black and coloured shoe leathers, coloured and fancy side leathers for the bag, trunk and saddle trades. In Toronto there are several sheep-skin tanneries as well.

Speaking generally, Quebec supplies the cheapest grades of leathers, chiefly black, Ontario the better finished lines both black and coloured. A portion of the American patterned machinery employed and formerly imported is now being manufactured in the Dominion, such as bark mills, fleshing machines, glazing jacks, drums and presses; but the most expensive and elaborate machinery is still made in the United States. The import duty on machinery is 25 per cent. The manufacture of hemlock extract in New Brunswick has already had a beginning, and will doubtless grow as the price of bark and labour advance.

VII.—Sulphuric Acid, Acetic Acid, Wood Alcohol, Charcoal and Ammonia.

The manufacture of commercial sulphuric acid has not yet been developed to the extent that the quantity of sulphur found throughout the Dominion would justify. There is enough sulphur in Canada to supply the entire home market with acid and even to develop a considerable export trade. Only a few firms, however, are engaged in the trade, and a large portion of their product is used in the refining of Canadian petroleum, some five million pounds being annually consumed for this purpose. Quebec, Ontario, and British Columbia are each represented in the acid industry. It is probable that the construction of electrolytic lead smelters will lead to the sulphur dioxide obtained from the galena being made into sulphuric acid, as is done at the Electric Lead Reduction Co.'s works at Niagara Falls, N.Y., where, it is stated, the sulphuric acid produced yields a financial return sufficient to cover the entire cost of the process.

At London, Ontario, the Canada Chemical Manufacturing Co. turns out about fifteen tons of sulphuric acid per day: brimstone, imported from the States, is used, and is preferred to the Sicilian sulphur. This company does not use pyrites on account of the arsenic it contains. The process employed is the chamber one, indeed, as far as the writer knows, the "contact" process has not yet been tried in Canada. Sulphuric acid is used by many manufacturers, such as tack, screw, nail, leather and fertilizer makers, wholesale druggists, dyers and oil-refiners. Phosphates of calcium and sodium are also made by this company, native phosphates and the animal charcoal (bone black) rejected by sugar refiners serving as sources of phosphorus. The acid phosphate of calcium is employed in the baking-powder trade instead of cream of tartar, and is claimed to be less costly, to keep better, and to restore to the flour the phosphates which, by the modern methods of milling, have been removed from the wheat.

Sulphites, bisulphites, crude acetic acid from the grey acetate of lime, chlorides of zinc and iron and Glauber's salts are likewise made.

By the destructive distillation of wood, acetic acid, wood-alcohol and charcoal are obtained; hence Canada, with its enormous supply of wood of all kinds, should be able to take a prominent place in the production of acetic acid and wood spirit. At the present time the residual charcoal from the retorts does not find a ready market, owing to the comparatively high rates for transport as compared with other fuels, weight for weight. The outlook in this direction is, however, brightening. Among the firms engaged in this manufacture might be mentioned the Standard Chemical Co., with plants at Fenelon Falls, Deseronto and Longford, Ontario, and Cookshire, Quebec, the Canada Paint Co., Montreal and Toronto, and the Lake Superior Power Co., which is said to have the largest retort plant in the world. Very keen competition has to be faced in this connection with the United States, as a combination of some 175 manufacturers practically controls the market. The crude acetate of lime produced in the distillation process is converted into acetic acid, some of which is sold for dye and colour-making purposes, while a considerable portion is exported to Europe and Australia.



Soap Boiling.
6 kettles, each holding 120,000 lbs.

The wood alcohol, obtained at the same time as the acetic acid, supplies the home market and is also exported largely to Great Britain, France, Germany, Holland, Japan, and Australia. It may be of interest to know that timber is imported from Canada by makers of wood alcohol in the United States.[29]

The total production of ammonia from all the gas liquors obtained in the destructive distillation of coal throughout the Dominion is, the writer is informed by Mr. J. G. Harvey of Toronto, about 235,000 pounds of a 28° Beaumé solution. As this quantity is in excess of what is required to supply the Canadian

(29) Mr. Webster, of the Standard Chemical Co.

market by some 100,000 lbs., that amount is exported to the States. Besides the numerous trade preparations of ammonia used for household and other purposes, "aqua ammonia" and anhydrous liquid ammonia are the two principal forms in which it is prepared. The process consists in mixing milk-of-lime in suitably constructed vessels with the ammoniacal gas liquor, agitating and heating with steam and conducting the liberated ammonia through more milk-of-lime, through a drip-tank and, in succession, through oil, charcoal purifiers, caustic alkali and finally to tanks of distilled water kept cool by running water, where the gas is absorbed and the ammonia of commerce thus obtained. Manufacturers claim that the amount of water required to be used during the process reduces the profits considerably, as the gas-liquors are of a poor quality, seldom exceeding 1½° Twaddle. Anhydrous ammonia is produced from the "aqua ammonia" by a series of fractional distillations, is liquefied by pressure and stored in hundred pound welded iron cylinders. It contains 99 per cent. liquid NH^3, and finds its principal use as a refrigerant.

V.—Soap and Glycerine.

Soap.

The soap industry in Canada is growing rapidly; at the present time some 15 large concerns are in operation, employing in all about 2,000 hands. A branch of the well-known firm whose headquarters are at Port Sunlight near Liverpool, was recently started in Toronto, with an annual capacity of 10,000 tons. Their products are similar to those made at their other works, and their raw materials are procured from Africa, the United States, and locally (tallow). They own islands in the Pacific from which they import cocoanut oil.

Many other firms are also manufacturers on a large scale and produce all grades, from the cheapest textile and laundry soaps to the finer qualities of toilet soaps. Great advances have taken place in the industry during the past ten years, particularly in the making of the latter. The same system of manufacture obtains in England. The raw materials are mainly cocoanut oil, palm oil, and tallow, the first two in a large measure superseding the last mentioned. The market for Canadian made soap is limited, the home market is supplied and a large export trade is done with the West Indies and Australia. The competition of the United States is felt more than that of England or France. In 1902 the value of the soap produced was approximately $3,000,000.[30]

Glycerine.

This necessary bye-product in the manufacture of soap is refined in some cases by the producers themselves; others sell it to firms engaged more particularly in the refining trade. Among these might be mentioned the St. Henri Chemical Co., of Montreal, who buy waste lyes from the soap manufacturers, recover the salt from the lye, refine the glycerine and sell to the makers of nitro-glycerine. The capacity of these works is 10,000,000 lbs. of waste lye yearly.[31]

VI. Refined Chemicals and Drugs.

There are very few makers of refined chemicals in the Dominion. The small demand for pure chemicals is mainly accountable for the lack of local manufacturers, the market being necessarily a small one, and most buyers of pure chemicals for laboratory uses are apt to demand articles of the make of one or other of the large and old-established German or English houses. One can hardly doubt but that the Canadian maker must desire a higher tariff on imported material. Of heavier chemicals, however, the Canada Process Co. has recently begun the manufacture and the work is proving very successful. Such products are bisulphite, sulphide, thiosulphate (hyposulphite), sulphite and sulphate of soda, lime and zinc salts, lactic acid, caseïn, etc. Messrs. Lyman Bros. & Co. are continuing to extend along the lines of refined chemicals, their gold and silver salts being much in demand. Along with these they produce and refine such high-grade chemicals as chloroform, ether, iodide of potassium, bromides, scale preparations, iron and zinc salts, acids of phosphorus, syrups, tinctures and flavouring extracts. Most of the raw materials are imported. In the drug department this firm has probably the best grinding machinery in Canada, where, besides their own work, they do a considerable amount of grinding for other firms. In the strictly pharmaceutical business, Messrs. Parke, Davis & Co., Walkerville, H. K. Wampole, Toronto, F. Stearns, Windsor, and John Wyeth & Bro., Montreal, have manufacturing establishments. Recently the brand "Made in Canada" has been much in evidence, and many buyers prefer such goods, even if they are slightly more expensive, to the imported article.

A few years ago the Liquid Carbonate Co. of Toronto commenced the manufacture of carbon dioxide on a commercial scale, and is now producing some two tons a day. The methods employed for obtaining the gas are from the action of an acid, such as sulphuric acid, on chalk, dolomite or sodium carbonate, and by the combustion of coke, while it is also got as a bye-product from the fermentation vats in breweries. The gas, after being washed and purified, is compressed, cooled and, in liquid form,



Cooling Soap.

Each block of soap weighs about 2,000 lbs.

is forced into steel cylinders at a pressure of from 60 to 80 atmospheres. (The cylinders are tested to a pressure of over 200 atmospheres). This liquid gas finds a market from the Atlantic to the Pacific, and is used for aerating mineral and artificial waters, for forcing beer from barrels in the cellar to a higher level and at the same time preserving it from deterioration. It is also used in the refining of sugar, as a motive power in spraying trees with a germicidal solution and in the laboratory for producing low temperature mixtures. Numerous useful bye-products are a consequence of the process of production of carbonic acid, such as fine clay used by paper-makers, Epsom salts and Glauber's salts—all of which are employed in many industries and command a ready sale.

VII. Fertilizers.

Mineral phosphates, in the form of apatite, are found in the Ottawa Valley, Ontario, but the deposits have not been worked for several years. About 1891, in which year the phosphates mined were valued at $50,000, a falling off began in the output of this mineral, which continued up to 1902, when the amount mined was hardly worth recording. This industry is on the in-

(30) Mr. Knight, of the Sunlight Soap Co.

(31) Letter from the President of the Company.

crease again, however, and last year saw a production valued at some $8,000. This state of affairs has been brought about mainly by the large supply of easily-worked phosphates found in Florida and Carolina, U.S.A., much of which is obtained by dredging. It may be mentioned, however, that a certain amount of apatite is made use of in the Province of Quebec by the Buckingham Electric Reduction Co., who manufacture phosphorus therefrom.[32]

Sulphate of ammonia is manufactured at the works of the Dominion Iron and Steel Co., Sydney, N.S., whose products are supplied to dealers and others engaged in the fertilizer business. The ammoniacal liquors of the Quebec, Ottawa, and Toronto Gasworks are worked up at the latter city by the Michigan Ammonia Co.[33] In Montreal, one firm, at least, makes sulphate of ammonia, and at one time the gas works there utilized their own liquors for its production. Latterly, however, the gas liquor was exported, to be dealt with by a firm in the United States.

Quite a number of other fertilizers are produced in the Dominion from refuse matter, such as blood, tankage, bones, and offal, besides natural phosphates. Ontario, New Brunswick, Quebec, Nova Scotia, Prince Edward Island, and British Columbia, all produce fertilizers, more or less.[34]

VIII. Coal-Tar and Asphalt.

Very little tar distillation is carried on in the Dominion, owing mainly to the tar produced in the gasworks being too thick for treatment with any degree of success. It is mainly used for saturating paper, which is employed largely as a waterproofing material by builders. Some is boiled down into pitch, but about one half of the tar produced is exported to the United States. There is a small distilling plant at Hamilton, Ontario, which, the writer understands, was, up to eighteen months ago, the only one of its kind from which coal-tar oils were produced in Canada. The Dominion Iron and Steel Co. at Sydney obtain a considerable quantity of coal-tar from their coke-ovens. This, at one time, found a market in the States, in Montreal and other points in Canada, but recently arrangements were made with an English chemical company to locate at Sydney with a view to utilizing all the coal-tar produced from the coke-ovens. The works, which are one of the largest on the continent, are now in operation and doing a large business in Canada, Europe and the United States: the demand for the company's products in Canada is not sufficient, hence the European and American exports. The present products are pitch and the various grades of benzol, creosote-oil and carbolic acid.[35] Large extensions are looked for from this company, which will be guided by the motto *festine lente* and, as opportunity offers, will branch into the production of other commercial commodities arising out of coal-tar and its distillation products.

Asphalt.

Asphalt occurs naturally in several varieties as albertite, found in King's and Albert Counties, N.B., and as maltha, one of the stiffer petroleum compounds, which is not of much importance, however, being almost too hard for use in street paving. Up to 1898, albertite was employed in gas-making, and much of it was shipped to the United States; but the original supply is now exhausted.

IX. Calcium Carbide, Carborundum, Corundum, and Graphite.

Calcium Carbide.

The production of this substance on a manufacturing scale dates back only to the year 1891, when Mr. T. L. Willson, of the Willson Aluminium Works at Spray, N.C., accidentally obtained carbide whilst trying to reduce lime by carbon in the electric furnace. Instead of metallic calcium resulting—which was to be employed in preparing aluminium—a hard, almost black, substance was got which reacted violently with water, giving lime and an inflammable gas clearly recognizable as acetylene. The author was privileged, through the courtesy of Lord Kelvin, to have at one time in his possession some pieces of the first carbide made by Mr. Willson at Spray. Acetylene being a powerful illuminating agent and readily obtained from carbide, the development of the carbide industry on a commercial scale followed this discovery as a natural consequence. The industry has progressed by leaps and bounds during the past decade, in Europe even to the extent of over-production.[36] Two carbide works are in operation in Canada using water as their source of power, namely, the Willson Carbide Co., at St. Catharines, Ontario, and the Ottawa Carbide Co. Another important prospective company is the Shawinigan Carbide Co. of Shawinigan Falls, Quebec.[39] The process of manufacturing consists in fusing together burned lime and ground coke in the electric furnace; the temperature required is not so high as that needed in other operations for which the electric furnace is employed, notably the making of carborundum and graphite. The reaction taking place in the furnace results in a transference of the oxygen of the lime to a portion of the carbon with the formation of carbon monoxide and carbide of calcium.

The present market value of carbide ($61 per ton)[40] affords



Craig Mine Mountain, showing Workings.

(32) Minerals of Quebec; published by the Provincial Government.

(33) Letter from Mr. Macfarlane, Chief Analyst to the Inland Revenue Department.

(34) Inland Revenue Bulletin, No. 81, 1902.

(35) Letter from Mr. JohnCraven, Sydney, 2nd Feb., 1905.

(36) Italy alone possesses enough carbide plants to supply the whole of Europe. Dr. J. W. Richards, in "Electrochemical Industry," Sept. 1902.

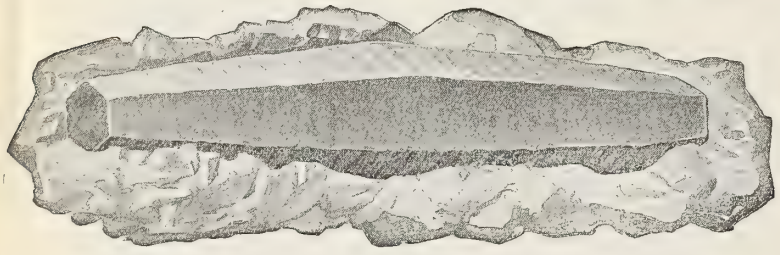
(39) Capitalized at 100,000,000 dols.

(40) Ontario Mines Report, 1901.

considerable profit to its manufacturers, and the increasing popularity of acetylene as an illuminant ensures a brighter future for the industry. In Ontario several towns have already had acetylene installed for house and street lighting, the gas being generated at a central station and distributed in pipes to the consumers.[41] At the generating station the gas is purified by a special process before use, which obviates all the disadvantages inseparable from the employment of small generators—automatic or otherwise—by individuals, who in most cases have neither the time nor the scientific skill necessary for the proper production of the gas, simple as it may appear at first sight.

Carborundum.

Ten years ago the very name "carborundum" was unknown; it is due entirely to the advance made in the development of electrical power, obtained from the immense waterfalls of the American continent, that this as well as other materials are now in daily use throughout the world. The history of carborundum may well be likened to that of carbide, its discovery being accidental. Mr. E. C. Acheson, whose patents are employed in this industry, was endeavouring to obtain crystals of carbon by melting together clay and carbon, the latter of which it was hoped might crystallize from the resulting reduced aluminium. Hard crystals were found after the fused mass had cooled, the component parts of which were concluded to be carbon and aluminium, and for which he invented the name "carborundum." Analysis, however, proved the new substance to contain silicon and carbon, and only a small quantity of alumina. Further experiments were made



Crystal of Corundum, imbedded in Orthoclase Felspar.

with mixtures of sand, carbon, and salt as a fluxing agent, and large crystalline masses of carborundum were obtained. The substance thus formed corresponds to the formula CSi, is extremely hard, and is used in place of emery and corundum. In the manufacturing process the materials employed are sand, coke, salt, and sawdust; the coke is reduced to kernels of a certain size, to be used for making the "core," and other portions are ground to a fine powder for mixing with the charge of sand and salt. The original form of furnace was fitted with a pair of carbon terminals, which could be moved longitudinally, and was essentially an arc furnace, the chemical changes taking place being due to the high temperature of the arc passing between the carbon terminals. In 1895 this form was abandoned and a continuous electrical connection made between the terminals by the introduction of a "core" of granulated coke. By regulating the diameter of the core it could be heated to a sufficiently high temperature to convert the surrounding mixtures into carborundum. In the modern form of furnace the brick ends and carbon electrodes, with the necessary terminals for connecting up the current, are the only permanent portions. The charge, consisting of sand, finely-ground coke, and sawdust—added to render the mixture more porous and consequently allow the gaseous products to pass through the mass—is placed in the furnace till it is on a level with the lower edge of the carbon electrodes. The coke "core" is then filled in, made into cylindrical form by hand, and finally surrounded at its sides and on the top by the remainder of the charge. Care is taken to prevent the mixture coming in contract with the carbon terminals, and necessary retaining walls are built up of bricks as the charging operation is proceeded with. The current is passed for 36 hours, and after cooling, the walls are taken down, unused "charge" raked off, and the outer crust of carborundum exposed. A cross section of the contents of the furnace presents many interesting characteristics. In the centre is the core, which has been, to a large extent, converted into amorphous carbon and graphite. From this there radiate beautifully coloured carborundum crystals to a distance of from 10 to 12 ins. Next a thin inner crust of amorphous carborundum of a light green color is met with, then the outer crust, also amorphous, and beyond this, the unchanged mixture.[42] A curious effect is observed near the core, where the temperature is highest; here are found crystals of carborundum, from which the intense heat has volatilized the silicon, leaving "skeleton" crystals of graphite, while the silicon, passing outwards, oxidizes to silica, and often presents the appearance of spun glass. Silicon itself has been found in the cracks in the bed of the furnace.[43] The carborundum is finally crushed, washed, and graded for the market.

Carborundum has a lower specific gravity than emery, and finds its principal application in the manufacture of wheels, stones, razor hones, rubbing bricks for marble dressing, paper, and cloth. The Canadian works of the Carborundum Co. were destroyed by fire in 1903 and have not been rebuilt. This plant was comparatively small, only operating 200 horse-power. The factory, however, supplied the Canadian market, thus avoiding the payment of duty. The writer was informed by Mr. Acheson that most of the Canadian product was exported to Scotland, to be used there in finishing granite. The estimated cost of the crude crystals is 2.5 cents per pound, that of the treated powder, 4.5 cents per pound, while the selling price averages 9 cents per pound.

Corundum.

The natural corundum industry of Ontario, which is of recent origin, is, however, now steadily growing in amount and value of output. The production of corundum in 1901 had a value of $53,115, and in 1903, $106,332, and in 1904 over three million dollars.[44] The chief producing company, the Canada Corundum Co., has just completed a new mill of greatly enlarged capacity, and the other operating concern, which formerly exported the corundum-bearing rock to the United States, after cobbing it merely, is now crushing and treating it on the spot. Two additional companies are in process of organization for producing corundum.[44 *bis*.]

To the Canada Corundum Co., of which Mr. B. A. C. Craig is the president, may be accorded the credit of having placed the natural corundum industry of Ontario on a firm basis: Craig Mountain is said to be the largest deposit of corundum in the world. The hardness of this substance has long been known, and under the name of emery it has, in an impure state, been used as an abrasive agent. The product of this mine is said to contain from 95 per cent. to 98 per cent. crystalline alumina, and from letters the writer has seen, its hardness and cutting qualities seem to have recommended it to consumers alike in Europe and on the American continent. Results are always the best tests of the efficiency of any agent, and the rapid increasing market that Ontario's corundum is finding is sufficient evidence of the quality of this material. The Craig Mine is now putting out about ten tons a day, and the management confidently expect a considerable increase in the spring.[45]

(41) Worked under patents held by the Burgess Gas Process Co., Canadian Pat. 73,040, Sept. 10, 1901; Eng. Pat. 241, Jan. 3, 1901; Amer. Pat. 701,995, June 10, 1902.

(42) Illustrated Catalogue No. III., Carborundum Company, N.Y.

(43) Electro-Chemical Industry, Vol. I., No. 2.

(44) Letter from Mr. B. A. C. Craig, President of the Canada Corundum Company.

(44 *bis*) See 19 *bis*.

(45) See note 44. An account of the Corundum Industry of Ontario will be found in the "Canadian Mining Review," Vol. XXIII, No. 10, (1904).

Graphite.

Though no company for the manufacture of graphite has yet been capitalized in Canada, the production of it by the Acheson process was carried on to a small extent in the Canadian branch of the Carborundum Co. at Niagara Falls. The formation of the "skeleton" crystals referred to above suggested making use of the decomposition of carborundum for making graphite itself. The inventor's patents include the production of graphite in the form of pure electric-light carbon, by subjecting impure carbon to a high temperature for a sufficient length of time to volatilize the impurities;[46] the conversion of carbon into graphite by mixing with such metallic oxides as would be capable of forming metallic carbides, to be subsequently decomposed;[47] the conversion into graphite of such natural carbonaceous material as contain uniformly intermixed through them metallic oxides sufficient to produce carbide, and thence graphite.[48] These processes throw considerable light on the scientific principles underlying the formation of this substance.[49]

(46) U.S. Pat. 542,982 of July 23, 1895.
(47) U.S. Pat. 568,323 of Sept. 29, 1896, and No. 617,979 of Jan. 17, 1899.
(48) U.S. Pat. 645,285 of March 13, 1900.
(49) Electrochemical Industry, Vol. I., No. 2.

(To be Continued.

SCIENTIFIC NOTES.

Fuel From the Refuse of Pulp Mills.

A new fuel successfully tested at Muncie, Ind., has been invented by Jacob Smith, a glass worker. It is said to possess more heat units per pound than either coal or wood. It can be manufactured and sold at a profit for half the cost of coal, and it does not smoke except when a strong draft is used. Its success as a fuel for domestic uses was determined some time ago, but not until recently, when it was used beneath an engine boiler, was its value for manufacturing demonstrated. The fuel is made largely from the refuse of the pulp mills, of which there are a number about Muncie. Each mill turns out thousands of tons of refuse annually. The refuse, a combination of soda and lime, is mixed with crude oil, and the finished product resembles putty. It may be cut with a spade and thrown into a furnace or beneath a boiler. No kindling is necessary, for a match touched to it will light readily, the material burning with an intense heat. There are no clinkers, and the ashes remaining after the fire has burned down may be made into a new compound for which Mr. Smith has another use. A bushel basketful of the fuel beneath a sixteen horse power engine at a Muncie factory kept steam up for eight hours. It is manufactured as a plasterer makes his mortar. The Patent Office has called it the Smith fuel.—*American Industries.*

The Supply of Coal in Britain.

In answer to the persistent and dire prophecies of exhausted coal fields and the consequent collapse of British manufacturing industries and the loss of the command of the seas, the coal commission stated recently that there seems no present necessity to restrict artificially the export of coal in order to conserve it for the home supply. As the result of elaborate enquiries it is estimated that the available supply is 146,874 million tons, while the annual output is 230 million tons. The commissioners, however, direct attention to the extravagance in steam consumption, the average coal consumption per hp-hour being about 51 pounds, although it should not exceed 21 pounds. There is a great waste at present owing to engines being scattered over factories, with long ranges of pipes and small, inefficient boilers. The use of oil and gas engines, they find, is increasing, but they consider that for greater economy the proper solution involves the general installation of central fire stations. With electrical power stations and electric motor drives, power should be delivered at the work for less than 21 pounds of steam at the prime-mover.—*Electrical World and Engineer.*

TRADE PUBLICATIONS.

Automobiles.—The famous Ford, the "Car of Satisfaction," must be regarded as a distinct acquisition to the ever-growing line of Canadian-made automobiles. Since its first introduction to the United States the Ford has enjoyed a wonderful popularity, and if the company's plant, equipment and staff of engineers at Walkerville are any criterion, the Canadian product will not detract in any particular from that enviable reputation. Their 1905 catalogue, a copy of which has just come to hand, is a model of neatness. It embraces all the standard lines, and elaborates the features of each machine in detail.

Display Fixtures.—Every retailer will be interested in the catalogue of Clatworthy & Co., Toronto, who are extensive manufacturers of display fixtures, show cases, wax figures, store stools, etc. Material of this sort, if used judiciously, will transform many an unattractive shop into something quite inviting. Only the most modern ideas in the way of display accessories are embodied in Clatworthy's catalogue.

Tents.—J. J. Turner & Sons, Peterboro, base their appeal for public patronage on 37 years' successful experience as makers of tents, sails, flags, awnings and lumbermen's supplies. They recently moved into new quarters, and now have one of the largest and best equipped factories of the kind in Canada. Their new 80-page catalogue is well arranged and freely illustrated.

Machine Tools.—Those interested in the work of cutting and fitting iron pipes will find in the bulletins of The R. McDougall Co., Galt, something of interest. Built in Canada and by well-known makers, their machines are guaranteed to be perfect in all parts. Illustrated literature is awaiting enquirers at their office.

Sheet Metal Building Material.—The Pedlar Metal Roofing Co.'s latest price list is an improvement on previous issues in that it gives the guage and weight of each grade of article. It illustrates the proper methods of lapping both roofing and siding, and gives many pointers that will be found valuable by one using their goods. They make a special feature of metal lath, which, in addition to its ordinary uses, is almost indispensable in connection with exterior cement work.

THE MADE IN CANADA STICKER.



THE Made in Canada Sticker designed by Mr. Watson Griffin has proved remarkably popular. Although it is only a few weeks since it was first published millions of the stickers have already been used, and the indications are that the demand for them is only just beginning. They are now being used by manufacturers throughout Canada from the Atlantic to the Pacific and many who are not manufacturers are beginning to use them because they think they can in this way assist in creating a sentiment that will build up Canada. While the design and the wording are Mr. Griffin's own, he states that he is indebted to Mr. H. Sykes, of the Thomas Organ & Piano Company, Woodstock, Ont., for the suggestion that it would be wise policy to issue a colored Made in Canada sticker in connection with the Made in Canada Educational Campaign. The lithographing work has been done by the Toronto Lithographing Company.

THE LIABILITY OF TRADES UNIONS

They may be Sued, says Mr. Justice Osler, in a Representative Action. Valuable Precedent, Illustrating the Proper Method of Recovery against Unincorporated Unions.

Another milestone has been passed in the action brought by the Metallic Roofing Company, Limited, Toronto, against the Sheet Metal Workers' Union, and the proper method of suing either a Local Union or an International Association has now been set at rest so far as the Province of Ontario is concerned.

It will be remembered that the Metallic Roofing Company obtained an order that the individual defendants, Jose, Russell, *et al,* should represent all other persons constituting Local Union No. 30 of the Amalgamated Sheet Metal Workers' International Association, and that all such other persons should be bound by the judgment, but the company's application for a similar representative order as to the International Association was refused. It had also been held that the International Association could not be brought into the action by serving the writ on Kennedy, its first vice-president, on the ground that the International Association not having registered under the Trade Union Act could not be served under the practice applicable to corporations.

An appeal to the Court of Appeal was taken by the company against the order of Mr. Justice MacMahon refusing a representative order as to the International Association, and the defendants cross-appealed against the same order in so far as it granted representation as to the Local Union. As the case had to go to the Court of Appeal it was thought wise to also appeal from the Divisional Court order setting aside service on Kennedy for the International Association, and on the plaintiffs' application an order was made permitting an appeal from this order to be taken along with the appeal from the order of Mr. Justice MacMahon, both being included in one appeal case.

The plaintiffs' appeal from the order of Mr. Justice MacMahon refusing a representative order as to the International Association was allowed with costs, and the defendants cross-appeal therefrom as to the Local Union was dismissed with costs, the opinion of the Court, delivered by Mr. Justice Osler, being as follows:—

"The question is whether bodies of this nature can be sued in tort in a representative action under the large words of Consolidated Rule No. 200.

It was stoutly contended that Rule 200 did not apply to an action for a tort, and that the plaintiff was practically without remedy for the injuries alleged, except by a probably useless action against the individual offenders. Temperton v. Russell (1893), 1 Q.B., 435 was strongly relied on in support of this view, and if that case stood alone we should probably feel ourselves bound to follow it. Its authority, however, as laying down any rule of general application has been impugned and weakened if not destroyed by the later cases of the Duke of Bedford v. Ellis (1903), A.C. 1 and the Taff Vale Railway Co. v. Amalgamated Society of Ry. Engineers, A.C. p. 426. It has been explained as a case in which the only point decided was that the persons sued were not fairly representative of the Union or Association. In the Taff Vale case it was held that a trade union registered under the Trade Union Acts of 1871, 1876, might be sued in its registered name. But the larger question is very fully dealt with. Lord Macnaghten, after pointing out that bodies of this nature registered or unregistered are not above the law, said that the question of how they should be sued was one of form, and adds (p. 438) "I have no doubt whatever that a trade union, whether registered or unregistered, may be sued in a representative action if the persons selected as defendants are persons who from their position may be taken fairly to represent the body," and he repudiates the contention put forward by the defendants' counsel that if a wrong was committed by a body of persons acting in concert who were too numerous to be made defendants the person injured would be without remedy unless he could fasten upon the individuals who with their own hands were actually doing the wrong. That, he says, would be a reduction to absurdity. "I should be sorry to think (he adds) that the law was so powerless, and therefore it seems to me that there would be no difficulty in suing a trade union in a proper case if it be sued in a representative action by persons who fairly and properly represent it."

"For my own part I think we are at liberty to adopt the views expressed in the passages I have quoted. It would be a most deplorable result if a plaintiff should be found to be practically without remedy in a case of this kind (I of course do not speak of the merits of this particular litigation) as he would be if he were unable to proceed in a representative action. As was said in the case cited we have not to consider how the judgment can be enforced; we have only to determine that the action is properly framed, and therefore as regards Local Union No. 30 A.I.A the order of my brother MacMahon should be affirmed.

"As to the A.I.A. I can see no reason why under the circumstances a similar order should not have been made. If they were parties to the wrongs of which the plaintiffs complain they were committed within the jurisdiction, and the only question would be who should be made defendants as representing their body. If the motion were before us now for the first time it might well be said that a wider selection should have been made, but I think it must have been overlooked that these defendants were content with that representation and consented to it. . . . I cannot see that the fact that they are a foreign body, seeing that they have many branches and an executive office in this country, can affect the question save as regards the extent to which it might have been thought proper to direct representation if that had not been consented to. I am therefore of opinion that the order of my brother MacMahon should be varied in this respect and representation ordered as provided by the consent."

As to the other branch of the case, namely, the right to proceed against the International by serving the writ on one of its officers, the Court of Appeal agreed with the Divisional Court that no such procedure was authorized by the practice in Ontario. Neither the Local Union nor the A.I.A. was a corporate body. Nor could either of them be regarded as a partnership. They were simply voluntary associations, united for the purpose of promoting the interest of the members in relation to their employment and against their employers—Trade Unions in short. Not being entities known to the law, they could not be effectively sued by their adopted name, nor served with proceedings merely by serving one of their members, no matter how exalted the position or high sounding the title he might bear in the Association.

No appeal has been or is likely to be taken against this judgment of the Court of Appeal, as it is hardly conceivable that the Supreme Court of Canada would interfere with any judgment of the Court of Appeal for Ontario, as the question is one concerning the practice and procedure of the Court. The question of procedure is therefore finally settled in Ontario, and so long as unions remain unregistered under the Trade Union Act actions against them should be brought against certain of their officers and most prominent members and an order of the Court should be obtained directing that the persons so named and served with the writ shall, besides representing themselves, represent all other persons constituting the union, and that such other person shall be bound by the proceedings and the judgment in the action.

Many actions against other unions have been stayed pending this appeal in the Metallic case, it being regarded by the Judges as in the nature of a test appeal to settle the practice in all cases. This action and the other actions will now proceed and no doubt many trials in union cases will take place at the autumn sittings of the Assize Court at Toronto.

Transportation Department

RATES TO NEW BRUNSWICK BRANCH LINES.

Recent changes in freigh rates to points located on the branch lines of the Canadian Pacific Railway in New Brunswick, running north from MacAdam Junction and Fredericton Junction, N.B., have been brought to the notice of this department.

Through rates from western points to stations on the branch lines named are arrived at by adding fixed arbitrary rates to the tariff rates in effect to the main line junction, and it is in these arbitrary rates that the changes have been made. Heretofore, the arbitraries represented in many cases the full local tariff rates. They have now been uniformly fixed at one-half the local tariff. The effect of this change may be illustrated as follows:—

Arbitrary Rates in Cents per 100 lbs.

From MacAdam Junction to:—

		Classes. 1	2	3	4	5	6	10
Deer Lake, N.B.—	Old rates	12	10	8	6	5½	5½	3½
	New rates	8	7	6	5	4	4	3
Benton, N.B.—	Old rates	12	10	8	6	5½	5½	3½
	New rates	10	8	7	6	5	5	4
Woodstock—	Old rates	12	10	8	6	5½	5½	3½
	New rates	12	11	9	8	6	6	4
Newburg Jct.—	Old rates	24	20	16	12	11	10	7
	New rates	14	12	11	9	7	6	5
Hartland—	Old rates	30	25	19	14	11½	10½	7½
	New rates	14	12	11	9	7	6	5
Florenceville—	Old rates	32	26	20	15	13½	12½	8½
	New rates	16	14	12	10	8	7	5
Bristol } Bath	Old rates	28	23	19	14	10	10	7
	New rates	16	14	12	10	8	7	5
Kilburn Perth Andover Aroostook	Old rates	28	23	19	14	10	10	7
	New rates	18	16	14	11	9	8	6
St. Leonards—	Old rates	18	15	11	8	6	5	4
	New rates	20	18	15	13	10	9	6
Millicette—	Old rates	43	35	28	20	15	14	9½
	New rates	18	16	14	11	9	8	6
Rowena } Quaker Brook	Old rates	45	37	29	21	15	14½	10
	New rates	18	16	14	11	9	8	6
Red Rapids—	Old rates	45	37	29	21	15	14½	10
	New rates	20	18	15	13	10	9	6
Arthurette } Plaster Rock	Old rates	48	39	31	23	16	15½	11
	New rates	20	18	15	13	10	9	6

From Fredericton Junction to:—

Keswick—	Old rates	24	20	16	12	11	10	7
	New rates	20	8	7	6	5	5	4
Millville—	Old rates	24	20	16	12	11	10	7
	New rates	14	12	11	9	7	6	5

Effect of Change.

As a result of this revision, through rates from points in Ontario and Quebec are reduced to the extent indicated by the difference in the arbitraries given above. While the change in this respect is satisfactory, so far as it goes, an examination of the present rates will show that, notwithstanding the reduction, through rates to points on these branch lines are still considerably out of proportion to the rates in effect to more distant stations on the main line of the C.P.R. and to contiguous and more distant stations on the main line and branches of the Intercolonial Railway.

To illustrate this more clearly, a comparison of rates and distances is here given.

From	To	Miles.		Class Rates. 1	2	3	4	5
Montreal—	St. John	482	(C.P.R.)	54	47	41	34	27
	Halifax	837	(I.C.)	56	49	43	35	28
	Sydney	989	(I.C.)	64	56	49	40	32
	Woodstock	449		66	58	50	42	33
	Bristol	475		70	61	53	44	35
	Plaster Rock	525		74	65	56	47	37
Toronto—	St. John	820		70	62	53	44	35
	Halifax	1095		72	64	55	45	36
	Sydney	1245		80	71	61	50	40
	Woodstock	784		82	73	62	52	41
	Bristol	810		86	76	65	54	43
	Plaster Rock	860		90	80	68	57	45
Hamilton—	St. John	859		74	65	56	47	37
	Halifax	1134		76	67	58	48	38
	Sydney	1284		84	74	64	53	42
	Woodstock	823		86	76	65	55	43
	Bristol	849		90	79	68	57	45
	Plaster Rock	899		94	83	71	60	47
London—	St. John	935		86	76	65	54	43
	Halifax	1210		88	78	67	55	44
	Sydney	1360		96	85	73	60	48
	Woodstock	899		98	87	74	62	49
	Bristol	925		102	90	77	64	51
	Plaster Rock	975		106	94	80	67	53
Windsor—	St. John	1048		90	79	68	57	45
	Halifax	1323		92	81	70	58	46
	Sydney	1473		100	88	76	63	50
	Woodstock	1012		102	90	77	65	51
	Bristol	1038		106	93	80	67	53
	Plaster Rock	1088		110	97	83	70	55
Owen Sound—	St. John	942		90	79	68	57	45
	Halifax	1217		92	81	70	58	46
	Sydney	1367		100	88	76	63	50
	Woodstock	906		102	90	77	65	51
	Bristol	932		106	93	80	67	53
	Plaster Rock	982		110	97	83	70	55

Cents per 100 lbs.

Through Rates Excessive.

It will be seen above that the rates to stations on the Canadian Pacific Railway north of the main line in New Brunswick are considerably in excess of the rates to stations on the Intercolonial Railway as far distant as Sydney, C.B.

It is difficult to understand why this should be, more especially when it is considered that the Canadian Pacific Railway will take traffic for Halifax and Sydney, hauling the same to St. John, N.B., and there transferring to the Intercolonial, accepting as its proportion rates much lower than are charged locally to St. John, N.B. It might reasonably be expected that the C.P.R. would be prepared to accept at least the same proportional earnings up to the main line junctions when traffic is consigned to points on its own branch lines in New Brunswick. The effect of withholding from the branch lines proportionate through rates must necessarily be to restrict to a greater or less degree the through shipment of freight from western points. This results in localizing trade and takes away from the territory involved the advantage of competition in trade from distant markets, which is enjoyed by towns along the main line of the Canadian Pacific and those located on the main line and branches of the Intercolonial. This action also deprives the railway itself of the increased earnings which would accrue from the long haul when traffic is brought from distant points of shipment.

It might be mentioned here that the Canadian Pacific Railway does not adopt the same basis for making through rates to points on branch lines south of the main line. These points are given the benefit of the main line rates.

Position of Fredericton.

The position of Fredericton, N.B., since the recent change is somewhat unique. This point heretofore was given the benefit of the rates in effect to main line stations. Since the change in the arbitrary rates, through rates to Fredericton from points west of Montreal have been advanced by the addition of the following arbitraries, namely:—

1	2	3	4	5	Classes.
8	7	6	5	4	Cents per 100 lb.

On west bound traffic, however, the rates from Fredericton still remain the same as from the main line points.

Prior to the acquisition of the Canada Eastern Railway by the Canadian Giovernment, the through rates to points on that line were made by adding arbitrary rates to and from the junctions of the Intercolonial and Canadian Pacific. Since the Canada Eastern Railway has been made a part of the Intercolonial System the class tariff rates in effect to St. John, N.B., have been made the maxima to all former Canada Eastern points, with the exception of Fredericton, Marysville and Gibson, N.B. It would have been natural to suppose that if any change was to be made in freight rates to the three latter points with the entry of the Intercolonial, it would have been in the direction of reduction, the same as was made to other stations on the Canada Eastern. Instead, however, through rates to Fredericton, Marysville and Gibson via the Intercolonial have been advanced to the extent of the arbitraries shown above.

There does not appear to be any satisfactory explanation of this position. It would seem that the Canadian Pacific Railway have been able to force upon the Intercolonial, in so far as these three points are concerned, their decision that points north of the main line must pay additional arbitrary rates. The position of the Intercolonial would seem to be somewhat inconsistent. In the past they have applied the St. John, N.B., rates as maxima to all intermediate main and branch line stations, and this has been continued, in so far as the Chatham and Fredericton branches (formerly Canada Eastern Railway) are concerned, until they come into competition with the Canadian Pacific Railway at Marysville and Fredericton, when the rates immediately advance by 8 cents per hundred lbs. 1st class.

The Canadian Pacific Railway, too, are in a peculiar position. The main line rates apply to Fredericton Junction. Arbitrary rates are added to points north of the junction as far as Fredericton and Marysville, N.B., but to Penniac and points beyond on the Chatham branch of the Intercolonial the rates drop back to the main line or St. John, N.B. basis.

In revising the basis for arriving at rates to points on branch lines in New Brunswick, the Canadian Pacific Railway do not appear to have given full consideration to the interests of the consumers in this territory, who are now unduly handicapped compared with the surrounding country. All localities are entitled to reasonable and just rates at the hands of the carriers serving them. It would be interesting to learn what peculiar conditions or circumstances exist which require these branch line stations on the Canadian Pacific to pay a higher basis of freight rates than stations on the main line and branch lines of the Intercolonial in the vicinity.

It has been well remarked by a writer on railway economics: "The permanent prosperity of any railway corporation is dependent upon the development of the resources tributary to the lines which it operates, and, as this development cannot be secured except through rates which are absolutely and relatively to charges from and to other regions reasonable, the corporation whose officers attempt to impose unreasonable rates is certain to be unsuccessful."

This matter would seem to merit re-consideration by the interested railways.

FOREIGN TRADE NOTES.

Travellers' Tax in British Columbia.

A bill has recently passed the British Columbia Legislature imposing a tax upon commercial travellers who represent non-resident companies. In its original form, the bill called for a tax to be computed at the rate of one-fourth of one per cent. of the annual sales. Subsequently it was amended to a specific tax of $100 every six months in the case of travellers for tobaccos and liquors, and $50 every six months for travellers in other lines.

It is stated that the passing of this bill was simply part of the Government's policy to inaugurate a reign of strict economy. The leading Boards of Trade and merchants generally were strongly opposed to it, and the opinion is freely expressed that the tax cannot be collected effectively.

South African Commercial Agency.

We regret this month to record the death of Mr. James G. Jardine, who until quite recently, acted as Trade Commissioner for the Canadian Government in South Africa. Mr. Jardine resigned his position some few months ago on account of ill-health. Returning to his family in Toronto, he at first showed signs of improvement, but at the end of a few weeks, he began to grow gradually weaker and on March 24th he quietly passed away. His death will be deeply mourned by a large circle of friends, both in this country and in South Africa, as well as by the business community in general, whose interests abroad he served so faithfully.

The vacancy in South Africa has been filled by the appointment of Mr. C. M. Kittson, who for the past seven years has been connected with the Lake of the Woods Milling Company. Mr. Kittson already has three years of successful experience in South Africa to his credit as the representative of the above firm, and his energy and determination will doubtless enable him to

A Commercial Intelligence Bureau.

The Commercial Intelligence Bureau, Limited, 49 Eastcheap, London, E.C., is, according to the announcement on their letter head, a national organization devoted to the extension of imperial trade and commerce. Some of their literature, which has just come to hand, outlines in brief the object of their service for foreign corresponding members. Stated in their own words, it is to afford importers and members in the colonies and abroad an opportunity of being placed in communication with manufacturers and merchants interested in entering into business relations with them, and of obtaining information on commercial matters through an entirely independent and impartial source. The Bureau also endeavors to assist colonial manufacturers who may be members in finding suitable agents for placing the goods they desire to export.

Prominent mercantile houses throughout this country are now being invited to become members of the Bureau at an annual fee of two guineas, and are also being asked, even though they be not members, to furnish the Bureau with the fullest particulars regarding their business, in order that accurate and reliable information may be circulated about them. In supplying the Bureau with information of this kind, no liability whatever is incurred, and the offer is one which we believe will be freely taken advantage of.

Turkish Letter.

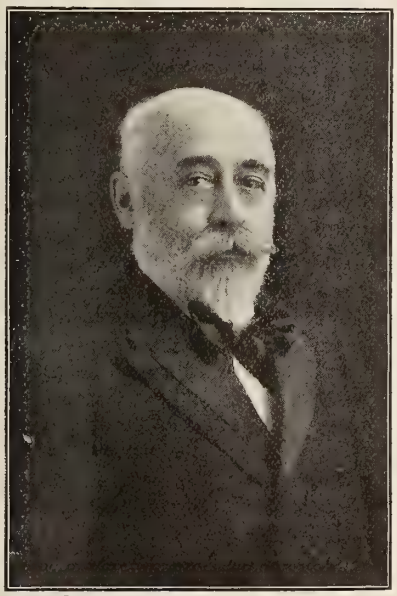
A correspondent of the Association who has been established in Turkey for the past eleven years, writes that the chief articles of export are figs and raisins, "Turkish Delight," carpets, emery ore and cereals. The largest items of import are cotton goods, agricultural implements, building material (all the wood is imported—pitch pine from Norway and other kinds from the Black Sea ports), and all sorts of manufactured goods, chiefly "Made in Germany." He is well placed to do business, he states, in any of these lines, and his address will be gladly furnished to parties desiring representation in that country.

Among the Industries

THE MANUFACTURERS OF CANADA.

No one in Montreal business circles is more widely known or more highly respected than Hon. J. D. Rolland, President of La Compagnie J. B. Rolland & Fils., wholesale stationers.

Hon. Jean Damien Rolland, manufacturer and legislator, is the eldest son of the late Hon. J. B. Rolland, in his lifetime a member of the Dominion Senate. Born in Montreal February 23rd, 1841, he was educated at the Christian Brothers' School and St. Mary's College, and when sixteen years of age entered upon a commercial career. He was first engaged as a clerk in the large stationery and fancy goods house established by his father in 1842, but so great was his aptitude for business that he was admitted to partnership in 1859. Not long afterwards he became the head of the concern, then known as J. B. Rolland & Fils.



No. 12. Hon. J. D. Rolland.

Mr. Rolland at one time took an active part in municipal affairs. He was a member of the Hochelaga Town Council from 1872 to 1879, when he was elected to the office of Mayor, a position he held for three years. When the town was annexed to Montreal in 1882, he was chosen as representative for Hochelaga Ward in the City Council. For nine years he held the Hochelaga seat, always seeking to act in the interests of his electors, and at the same time endeavoring to promote the welfare of the city at large. During the concluding years of that period, he held the important office of Chairman of the Finance Committee, his administration being marked by strict honesty and skilful ability.

In 1892, when he met defeat in his own ward on a labor question, a striking tribute was paid to his merit. Ald. Shorey, who sat in Council for St. Antoine Ward, immediately resigned in favor of Mr. Rolland. Mr. Rolland was elected and continued to serve the city's interests as alderman until 1893, when he definitely retired from the municipal arena.

Politically a Conservative, Mr. Rolland has always stood high in the councils of his party. In 1896 he was called to the Legislative Council of the Province of Quebec, a position he fills with dignity and ability.

Hon. Mr. Rolland is an enthusiastic member of the Canadian Manufacturers' Association, and in 1902-03 he was Chairman of the Montreal Branch. He is at present one of the most active members of the Montreal Executive, where his counsel and advice are highly esteemed. Many other associations are glad to have him on their official boards. Mr. Rolland is a member of the Council of the Montreal Board of Trade, and the Chambre de Commerce. He assisted in the establishment of the Dominion Commercial Travellers' Association, and has held office in it, as President and Vice-President. He is also President of the Colonization Society of Quebec, Vice-President of the Citizens' League, President of the Northern Colonization R. R., Vice-President of the Montreal Western R. R., President of the Northern Milling Co., and a Director of the Bank of Hochelaga.

Negotiations are now under way with a view to effecting an amalgamation between the Prescott interests and the Aptus Veneer Co. The new concern will be capitalized at $200,000, and will have its head offices at Albert, Albert County, N.B.

The Canada Malting Company of Toronto has decided to establish a branch in the West. Winnipeg and Portage la Prairie are spoken of as the probable location. It is understood that the latter town is offering the company special inducements.

The Manitoba Iron Works Limited of Winnipeg are at work upon a mammoth boiler which, when complete, will be the largest in use west of Lake Superior. It will be installed in the new sash and door factory of the Rat Portage Lumber Company.

It is reported that the repair shops of the G.T.R. at Stratford, Ont., will be greatly enlarged this spring. The erecting shop will be extended an additional 170 ft., and a new building of steel and cement 180 x 120 ft. will be put up for use as a boiler shop.

The Ontario Wind Engine and Pump Company, Limited, Toronto, have recently moved into their new and spacious galvanizing shop. It was erected and equipped only after careful inspection of large establishments on the other side, and is said to be one of the best of its kind in Canada.

The fire which visited the works of the B. Greening Wire Company at Hamilton some weeks ago was by no means as serious a one as seems to have been given out in the press. The company is still taking care of all orders received, as will be noticed from their advertisement which appears in another column.

Following the death of Mr. Zéphirin Paquet, Sr., it has been found desirable to make a change in the business heretofore carried on under the name of J. Arthur Paquet, Quebec. The former name will still be used in connection with the wholesale section, while the retail section will be conducted under the style of Z. Paquet.

Extensive additions to the plant of the Cariboo Consolidated Hydraulic Mining Company, Bullion, B.C., will shortly be undertaken, at a cost of about $245,000. The undertaking involves the construction of 15 miles of canal at a cost of $9,000 per mile, the laying of over 10,000 feet of pipe, and the construction of cribbing and a dam at the outlet of Spanish Lake.

General attention is being directed to the excellent oil wells which are opening up in the Leamington District. A company of Detroit capitalists has been formed known as the Union Gas and Oil Company of Ontario, capital $500,000, who will continue drilling for wells in that vicinity. Experienced men are quoted as saying that the field offers splendid possibilities.

Messrs. F. W. Bird & Sons Company of East Walpole, Mass., have purchased a nine acre site in Hamilton, Ontario, upon which they will erect a $20,000 factory. The company will manufacture principally roofing paper and will provide employment for 200 hands.

Good progress is being made with the construction work for the Electric Railway Light and Power Company, situated near Woodstock, N.B. The total cost of the plant will be in the neighborhood of $150,000, and it is expected to be in running order late in the summer.

The Walker Steel and Range Company will move their plant from Windsor to Grimsby, Ontario. The latter town has agreed to loan them the sum of $15,000 free of interest for ten years, together with other inducements, in return for which the company agrees to employ 150 hands.

The Londonderry Blast Furnace was blown out early in March to permit of its being relined, and it is hardly likely that the work of smelting will be resumed before the 1st of May. In the meantime other branches of the company's works will be started, and it is expected that most of the men will be provided with steady employment.

The Southam Printing and Lithographing Company, London, have recently installed one of the latest models of embossing machines, which is said to be the largest in Canada. This firm make a specialty of labels of all kinds, and last year turned out over 25,000,000 fruit and vegetable can labels, besides many thousands of biscuit, candy, cereal and other labels.

The Nasmith Company, Limited, of Toronto, recently purchased the business of Mr. W. C. Shelly of St. Catharines, and will at once take steps to establish themselves on a large scale in that district. It is understood that this is only the first of a series of moves to be made by the Nasmith Company, looking to their establishment in various parts of the province.

A new record for the Algoma Steel Rail Mill at the Canadian Sault was made early in March, when rails were turned out at the rate of 742 tons per day of twenty-four hours. The capacity originally provided for was only 500 tons per day. The company has recently received $60,000 in bounties from the Dominion Government, and is now at work filling a 25,000 ton contract for the Canadian Pacific.

The Stave Lake Power Company has resumed operations on the development of the water power of the Stave River Falls, for the purpose of furnishing electricity for power and light to the city of Vancouver. While the Falls is capable of a development of from 15,000 to 20,000 h.p., it is proposed to develop only 6,000 h.p. in the meantime for transmission to Vancouver, and this quantity they hope to be delivering within a year.

The Imperial Export Company, Limited, have been successful in obtaining a contract for the year 1905, to furnish the city of Durban, South Africa, with school desks. These will be manufactured by the Canadian Office and School Furniture Co. of Preston, Ont. The business was secured in direct competition with the United States manufacturers, a decided sentiment being shown in favor of Canadian-made goods.

The village of Lakefield, Ontario, will soon have a furniture factory. Arrangements are under way for the amalgamation of the Standard Art Manufacturing Company, Toronto, with the Lillicrap Tate Lumber Company, who will jointly engage in the new enterprise. The village is asked to guarantee their bonds to the extent of $15,000, and if the by-law carries employment will be furnished to from 60 to 100 men.

A steel railway dry dock is now assured for North Sydney, Cape Breton, of sufficient capacity to accommodate steamers and vessels of 5,000 tons. The necessary capital of $250,000 has been subscribed. The Dominion Government will give a subsidy of $6,000 a year, and the concern will have a local bonus and provincial subsidy. Capt. J. A. Farquhar of Halifax is the principal man behind the promotion of the enterprise.

The Canadian Canners, Limited, who threatened to close their St. Catharines plants owing to difficulties which they had experienced with growers in that section, have succeeded in contracting for a sufficient quantity of tomatoes for next season's pack at the rate of 25 cents a bushel. The price demanded by the Growers' Association was 30 cents. The latter claim that they can devote their time much more profitably to raising other kinds of produce.

Mr. John E. Burchell and others of Sydney, Cape Breton, have succeeded in forming a company to be known as The Canada Wire and Nail Company, Limited, with a capital stock of $200,000, the object of which is to manufacture and sell nails, spikes, nuts, bolts, screws, wire and wire fencing. It is expected that at the outset about forty men will be employed. Arrangements are being made with the Dominion Iron and Steel Company for the necessary supply of raw material.

At the annual general meeting of the shareholders of the Canada Paper Company, Limited, held in Montreal on March 14th, a year of satisfactory progress was reported. Dividends have been paid on the preferred stock and a satisfactory balance has been carried forward. A new chemical fibre mill with a daily capacity of ten tons, has been established at Windsor Mills, Quebec. For the ensuing year, Sir Hugh Montagu Allan has been elected president, and Mr. H. S. Holt, vice-president.

Plans are under way for the development of an immense amount of power at Grand Falls, N.B., by a company who are prepared to expend between $3,000,000 and $4,000,000. In addition to the hydraulic development, it is proposed to manufacture ferro-manganese, pulp and paper, to erect saw mills and operate electric railroads, and to transmit power to St. John to be utilized for lighting and manufacturing purposes. United States capitalists, including Mr. Barton E. King of New York, are behind the enterprise.

The plant of the Fowlers' Canadian Company, Limited, Hamilton, a branch of the Swift Company of Chicago, will be enlarged this spring at a cost of between $50,000 and $70,000. Provision will be made for the slaughtering of 6,000 hogs per week, besides additions to the capacity of the sheep and cattle slaughtering houses. As a natural consequence, the Stock Yards Company are preparing to enlarge their premises in order to accommodate the increased number of sheep and cattle which they will be called upon to handle.

The Robb Engineering Co. of Amherst, N.S., have recently moved into their new machine shop. It is a magnificent structure, being more than half glass, and is provided with electric cranes, and motors for driving the various machines. The report of the company's operations during the past year was a most encouraging one. Their business has been expanding very rapidly in the West, no less than ten towns west of the Great Lakes, having been supplied with steam plants for electric lighting and other purposes.

A strong deputation from different points in the Maritime Provinces, Ontario and British Columbia, recently waited upon the Dominion Government, asking for a bonus to be granted on a tonnage basis to promote the steel shipbuilding industry in Canada. It is reported that a company has been organized in Halifax for the purpose of establishing a steel ship yard there, providing satisfactory arrangements with the Government can be effected. The city of Halifax and the local Legislature are said to be in favor of subsidizing the industry very liberally.

Reports are current to the effect that J. R. Booth, the millionaire lumberman and railway builder of Ottawa, will shortly embark on the manufacture of paper on a large scale. Through the sale of the Canada Atlantic Railway, some $15,000,000 of Mr. Booth's money was released, and it is believed that a good part of this will find investment in pulp and paper mills. Mr. Booth already has a large pulp mill at Chaudiere; an eighty ton paper mill is now going up in the same town, and it is understood that a second paper mill, as well as a mill for the manufacture of sulphite pulp, will be erected there during the coming summer.

Foreign Trade News

Canadian Banks and their Foreign Correspondents.

Mr. J. S. Larke, writing from Sydney, Australia, states that much suffering and annoyance has been caused Canadian visitors to that country through their bankers failing to provide them with proper medium of exchange. Drafts on London, such as they bring with them, are of little use unless the signatures of the issuing officers have first been registered with the bank's Australian agents, as otherwise all the Australian banker can do is to put them through for collection, involving a delay of nearly three months.

Coming from Mr. Larke, such a statement must be accepted as representating cases which have actually occurred, though it scarcely seems credible that Canadian banks, possessing the facilities they do, should be so indifferent to the interests of their customers as to allow them to visit a foreign country without first providing them with negotiable paper. It is true that some years ago the custom was prevalent of selling to travellers drafts on London, and even yet, when one starts out on a journey without knowing where all he is going, it may be to his advantage to carry exchange of this sort with him. But nowadays scarcely any one thinks of travelling abroad without first arranging for a letter of credit. This he can procure from any of the leading Canadian banks, and with it he can realize on drafts through correspondents of the issuing bank in any part of the world. Not only have Canadians banks unexcelled facilities along these lines, but they are doing everything they can to cultivate this phase of their business on account of the large profit there is in it, and there is really no excuse for Canadians in Australia, or any where else, getting themselves into difficulties such as Mr. Larke mentions.

The West Indian Mail Contract.

Mr. James Cox Fillan, a member of the Legislature of Dominica, British West Indies, and the owner of large interests in the lime juice and cocoa trade, is reported by the *Montreal Star* as having expressed himself as follows regarding the Pickford and Black Mail Contract, which expires this year:—

"It is said that the Royal Mail Steam Packet Company will compete for the contract, but I doubt very much that it will go to any but the present contractors. If there is any fault to be found with the service, the contractors are blameless, for they have stuck to their contract, and naturally if a better service, faster ships, etc., are required, the subsidy must be increased in proportion. It may be true that the New York lines secure much of the freight from the island, but it only proves how much freight the islands are capable of giving to northern-bound steamers, if in addition to what goes to New York they can still send the mail boats full to Halifax every trip."

The inference from Mr. Fillan's remarks is that a much larger trade with Canada might be built up. One Montreal firm already has an extensive lime plantation on the island, but such is the demand for lime juice in this country that Mr. Fillan frequently sends large consignments here himself. Limes and cocoa are marketed widely through the United States, England and the Continent, and in the northern islands the cultivation of cotton has been commenced with marked success.

Commercial and Industrial Egypt.

U. S. Consul Morgan, of Cairo, in a report on the commerce of Egypt, remarks:—

"Egypt is an agricultural country, pure and simple. If we except the new industry in exporting oil cake, there are no local manufacturers supplying a foreign market. Manufactories have very recently been started—spinning, brewing, cement, soap, and furniture—but these supply a local demand, and they have not to any appreciable extent affected the import trade in similar articles. There are neither coal nor other mineral deposits in the country, so far as is at present known, though exploration work on a large scale is being carried on. There are no forests in Egypt, and it is but recently that plantations of economic timbers have been started. Almost everything, apart from agricultural produce required by the inhabitants, has to be imported, and even agricultural produce is hardly an exception, for some of the cereal and vegetable crops must be supplemented by imports."

Egypt's total exports in 1903 amounted to $96,500,000, of which $77,500,000 was cotton, $8,450,000 cotton seed oil and oil cake, $3,200,000 cereals and vegetables, $2,100,000 cigarettes, and $1,700,000 cane sugar and molasses.

Her imports for the same year were valued at $82,800,000, including almost every kind of manufactured article. Textiles, yarns and clothing constitute the largest class, amounting to $24,500,000, followed by metal manufactures to the extent of $11,100,000, breadstuffs $8,250,000, timber $8,900,000, and animals and their products $4,400,000.

Brussels Exhibition, 1905.

Circulars have been issued announcing the holding of an International Exhibition of Arts and Industries at Brussels, Belgium, during the months of September, October and November next. The occasion of the exhibition, of which the King of the Belgians is patron, is the commemoration of the 75th Anniversary of Belgian National Independence. The particulars supplied include the proposed classification of exhibits, and the general regulations as to space, terms, etc.

Permanent Exposition at Grenoble.

The local Chamber of Commerce at Grenoble, France, has opened an industrial museum, or permanent exposition of the special products and diverse industries of the region. It is to be supplemented later by an agricultural museum and bourse to show the progress of science, as applied to soil cultivation, and the best implements for field work, and to facilitate business transactions on the part of farmers and cultivators.

Colonial Exposition in Marseilles in 1906.

A Colonial Exposition will be held in Marseilles in 1906, for which preparations are being made with great energy. The U.S. Consul General at that city reports that a site has been selected, and 1,500,000 francs ($289,500) has been voted by the department, city, and Chamber of Commerce. The various French colonies have already appropriated 5,000,000 francs ($965,000), to meet their expenses in this exposition, and further financial aid is expected.

Shipping in 1904.

In a review of steam shipping for 1904, Angier Brothers state that the net result of the past twelve months trading with steamers under the British flag must be written up as a fourth year of unprofitable work. A few trades, however, have relieved the general monotony, and caused it to compare in a small degree favorably with 1905. The volume of trade was large considering the general restrictive tendency of all markets, but rates of carriage ruled below profitable figures, in many cases involving serious loss. The saving features were the revival of trade in India and Australia and continued good crops in Argentina, coupled with a small share in the profits of contraband trade with each of the belligerents in the far East.

The prospects for the next twelve months they do not regard as encouraging, mainly on account of the continued over-produc-

tion of new tonnage. Apart from the effects of the war in progress, there are few if any signs of increase in the demand for carriage as against the continued large increase of tonnage, and this position seems likely to prevail for another two years.

Canada, they say, has had a year of signal progress in immigration and consequent agricultural and commercial expansion, but an over supply of tonnage has kept freights below paying level. A distinct and clearly shown desire for a Preferential Tariff Treaty with Great Britain and sister nations, backed by her own initiative in favoring British goods, has emphasized the resolutions unanimously passed at the 1903 Congress of Chambers of Commerce of the Empire. With her enlightened immigration and railroad policy, and vast naturally rich territory and fine seaboard, Canada bids fair rapidly to catch up with the older nations and form an important power in the world.

Dairy Farming in Argentina.

Recent advices from the Argentine Republic refer to the progress which is being made in dairy farming. A Buenos Ayres paper says:—"During the year great strides have been made in Entre Rios in dairy farming, which is becoming such an important industry throughout the Republic generally. A large amount of high-class separating machinery has been introduced and creameries have sprung up in all directions. Cows, which formerly were kept solely for breeding purposes, are now being systematically milked on a large scale and the separated cream is being shipped to Buenos Ayres. All that is now required is a large central butter factory in the Province, and there is rumor that such a factory is shortly to be put up, where the butter can be dispatched in a frozen state to the great frozen-meat establishments to be shipped direct to Europe."—*U. S. Consular Report.*

Wind Motors.

Cape Colony.—Owing to the frequent droughts there is a great deal of artesian well-boring done in the Cape, and most of the machinery employed for this work belongs to the Government. There is, therefore, a very good demand for pumps and for wind motors and water elevators. The types of wind motors most used are the light ones for supplying water to the flocks, and heavier ones for irrigation purposes. To sell here wind motors must comprise the following conditions: lightness of build, strong pumping capacity, easy working, even in a light breeze, and simplicity of mechanism requiring little attention. The question of price is an important one also. Up to the present time the American machines of this type have been the ones which have given the most satisfaction and enjoyed the largest sale.—*Das Handels Museum.*

Progressive Mexico.

Upon his return to Montreal after a business trip to Mexico, Mr. D. A. Ansell, Consul General of that country in Canada, stated that everything there was progressing most favorably in regard to the great Canadian investments, and that he found Mexicans everywhere deeply impressed with the combined enterprise and solidity of the Canadian business man.

"What we need in Canada is to pay as much attention to learning the live business languages as they do in Mexico," said Mr. Ansell. "You have absolutely no idea of the business possibilities of Spanish, which is the language of the whole southern half of this hemisphere. The possibilities of trade with Mexico alone are unbounded. The country is enormously prosperous. There are more and finer new houses going up in the City of Mexico alone than in any city of Canada."

After touching upon the magnitude of her import and export trade, Mr. Ansell continued:—"The direct Pacific Steamship Line, which is now assured, will do a big business, and be an immense benefit to British Columbia; but we must have also a direct steamship connection on the Atlantic. We have now a commercial representative there, who seems to be a very able and enterprising young man, and who, thank goodness, knows Spanish, but it will be a great mistake if he is not given a free hand in the matter of getting first-class office accommodation and a good sample room in the City of Mexico. There should be a well situated sample room there, where all classes of Canadian goods could be shown; and I am certain that the Mexican Government would show itself accommodating in regard to relieving from Customs duty the samples to be shown in such a sample room."

Biscuits.

Java.—The biscuits most in demand in this island are of British origin, the annual import trade of the best kind being calculated at about 300 cases. There are also a few French biscuits sold, the quality of which is appreciated, but the demand for them is small notwithstanding. Many hundreds of cases of a cheap article reach us every year from Hamburg. These German biscuits are very cheap, retailing at 42½ cents per 2 lb. tin. During the last few years the manufacture of biscuits with tapioca has been established at Singapore, and the importation of these into Java has been considerable. Of late the British manufacturers, who up to quite recently kept to the finer kinds, have been turning out cheaper biscuits to compete with the Hamburg houses. English biscuits have been paying 20 per cent. ad valorem duty up to the present time, as they were all considered to be of superior quality, but as soon as they became classified under the same category as the German, the latter will lose their monopoly of the cheap trade.—*Austro-Hungarian Consul at Soerabaya.*

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

304 **Agencies**—A correspondent in **San Antonia, Texas,** is contemplating going to Mexico to start a manufacturer's agency and solicits correspondence. He has lived in Mexico for some years and is conversant with the language.

305 A mechanical engineer with six years' practical training and of good education desires to take up the representation in the **United Kingdom** of Canadian manufacturers and to push the sale of goods suitable for the market.

306 A resident at **Vichy, France,** having a knowledge of English, desires to hear from a Canadian firm requiring an agent in France.

307 **Apples**—A **London, England,** firm of fruit importers have asked that their name may be placed before apple shippers in Canada, as having good connections in London and the provinces. They are in a position to dispose of large quantities.

308 **Brass, Copper and Other Scrap**—A metal merchant is anxious to quote for the purchase of brass loco. tubes, firebox copper plates, and other disused railway material, old gun carriage metal, cartridge cases, etc., which may be offering in Canada for shipment to **England.**

309 **Buggies and Carriages**—A company in **Bridgetown, Barbadoes,** carrying on a retail business since 1867 asks for price lists of the above with full shipping information, and quotations f.o.b. port.

310 **Butter**—A manufacturer's representative and commission agent in **Den Haag, Holland,** asks for the addresses of Canadian shippers of butter.

311 **Butter and Cheese**—A produce commission merchant at **Glasgow, Scotland,** wishing to increase his business with Canada has asked for addresses of creameries, cheese factories and shippers of dairy produce in the Dominion.

312 **Cabinets (Filing), File Boards, etc.**—A **London, England,** correspondent asks for quotations on file boards in lots of not less than 1,000 of each of the different sizes given. These

are desired in striped boards and basswood boards. The same correspondent asks for quotations on letter filing cabinets containing from four to twelve drawers.

313 **Cabinets (Kitchen) and Specialties**—A correspondent in **Worcester, England,** desires to communicate with Canadian manufacturers of kitchen cabinets and specialties for agricultural and domestic use. He carries on a wholesale business and has recently opened show rooms. He forwards three Canadian references.

314 **Calcium Carbide**—An important enquiry comes from **Mexico City, Mexico,** for calcium carbide for making acetylene light.

315 **Chairs (Wood Seat)**—A manufacturer's export agent in **New York** seeks correspondence with shippers of the above.

316 **Cider, Wood Spokes and Hubs, Hardware Sundries, Baby Carriage Brakes**—A Canadian representing **English** and foreign correspondents has recently received an enquiry from **Bristol, England,** for the above articles.

317 **Confectionery and Paper Bags for Confectionery**—A correspondent conducting a wholesale confectionery agency in **Leicester, England,** established 1889, desires to purchase or sell on commission the product of Canadian factories, as above. References will be forwarded on request.

318 **Cotton Goods, Knit Goods, Muslins, Woollens, Flannels, Canvas, etc.**—A wholesale dealer and general importer in **Mayaveram, Madras,** asks for catalogues and price lists with trade quotations on the above lines. If goods and prices are satisfactory, one-third value of goods will be paid in advance, balance on delivery of shipping documents.

319 **Engineers' Supplies and Machinery**—An agent in the engineering trade in **Dublin, Ireland,** desires to get in touch with Canadian shippers of the above.

320 **Fish, Cod and Herring**—A company in **St. Vincent, B.W.I.,** recommended to the Association by a Canadian shipper, solicits consignments of the above.

321 **Flour, Lard, Cod Fish, Salmon, Mackerel, Herring Oil, Toilet Soap, Canned Goods, Dry Goods, and General Provisions**—A manufacturer's representative in **Surinam, Guiana,** who at present represents a number of important Continental houses, desires to introduce Canadian products. His business is carried on both on a purchase and commission basis. Payments are made by remittance or against drafts. References will be forwarded on application.

322 **Foods (Preserved), Canned Lobsters and Canned Salmon**—A correspondent at **Boulogne, Sur Mer, France,** established in the wholesale business since 1901 desires to purchase the above. He asks for quotations f.o.b. Havre. Payment will be made 30 days from date of delivery. He forwards his bank as reference.

323 **Flour, Hardware, etc.**—A **Lagos (West Africa)**, firm of merchants ask to be placed in communication with reliable exporters in Canada of flour, hardware and other goods.

324 **Furniture, Brushes and Woodenware**—An **English** firm of wholesale hardware merchants has asked to be placed in touch with Canadian manufacturers of the above who may require agents in Great Britain.

325 **Hams, Produce and Flour**—Inquiry has been made by a correspondent at **Jersey, England,** for names of Canadian exporters of the above.

326 **Handles (Broom), Chair Bottoms, Spindles, Hardware, etc.**—A **Birmingham, England,** correspondent with an established connection in the Midlands prepared to act as agent or buying agent for manufacturers of the above lines, desires correspondence with shippers.

327 **Handles (Broom and Shovel)**—A company in **Llantrisant,** Wales, dealers in the above, desire to purchase same in quantities. They wish quotations f.o.b. port.

328 **Herring, Cod Fish, Flour, Meal, Corn, Oats, Hardware and Dry Goods**—A company in **Montego Bay, Jamaica,** importers of the above lines, are seeking correspondence with Canadian shippers. They are prepared to supply ginger, pimento, coffee, honey and annatto.

329 **Honey**—The addresses of Canadian exporters of honey have been inquired for by an **English** correspondent.

330 **House Building Material, Doors, Sashes, Cases, Trimmings, Mouldings, etc., Broom Corn and Broom Handles**—A manufacturing company established in the wholesale and retail trade for the past ten years in **Barbados, B.W.I.,** desires to purchase the above goods. They ask for quotations f.o.b. St. John or Halifax. All purchases are made for cash. References are forwarded.

331 **Iron and Iron Goods of all kinds, Iron Tools for Blacksmiths, Masons, Carpenters, Gardeners, etc.**—A correspondent in **Mayaveram, Madras,** asks for price lists with quotations f.o.b. on the above lines. Payment will be made one-third with order, balance against shipping documents. This correspondent is established as a wholesale dealer and importer since 1902.

332 **Merchandise, General**—Inquiry is made by a correspondent at **Warsaw,** respecting the possibility of his getting into touch with Canadian exporters seeking a market in his district.

333 **Metal, Scrap**—A firm of iron merchants in the **North of England** are desirous of purchasing disused railway material and old metal generally from Canadian sources.

334 **Mica**—A correspondent in **Berlin, Germany,** favorably known to the Association, desires to procure mica in sheets, rough and ready trimmed in all sizes, and pulverized mica in all natural colors beginning with white.

335 **Oars (Ash)**—A company in **London, England,** with offices in six different South African centres, asks for quotations for ash oars all lengths. This inquiry is made by a firm well known to the Association, and goods are required for South African trade.

336 **Powder (Washing)**—A company in **Raniganj, India,** established in the wholesale and retail business since 1891, desires the sole agency for India of the above article. They state that large quantities will be required monthly. They ask for prices f.o.b. Calcutta, payment to be made cash on delivery.

337 **Produce**—A **Scotch** firm who act as buying agents for South African houses wish to hear from Canadian manufacturers and exporters of produce with f.o.b. prices Canadian ports.

338 **Provisions, Dry and Fancy Goods, General Groceries, Furniture, Malt and Spirits**—A general commission merchant and agent carrying on a wholesale and retail business in **Surinam, Guiana,** desires to act as representative for Canadian firms. He wishes either to purchase or sell on commission. Terms to be three or six months or a limited open credit.

339 **Specialties of All Kinds**—A **New York** export agent who makes a specialty of disposing of patented specialties all over the world, wishes to represent Canadian manufacturers of the same.

340 **Spokes and Hubs (Wood)**—Enquiry has been received from **Bristol, England,** for the addresses of Canadian manufacturers and exporters of the above.

341 **Typewriting Machines and Supplies, Leather**—A company in **Raniganj, India,** established as wholesale and retail suppliers since 1901, desires to purchase the above. They wish leather suitable for uppers of shoes and oak tanned, ready cut for heels and soles. They ask for quotations f.o.b. Calcutta and desire to purchase for cash on delivery.

342 **Wood (Orme) and Birch Boards**—A manufacturing company in **Leith, Scotland,** asks for the addresses of firms in a position to supply orme wood cut to dimensions and birch boards ½in., ⅝in., 1¼in by 16in. broad dressed and ready for the manufacture of chairs.

IMPORTS OF MANUFACTURED GOODS.

Statement Showing the Quantity and Value of Imported Goods Entered for Consumption in Canada during the Six Months Ending December 31st, 1904.

Under the direction of the Commercial Intelligence Committee of the Canadian Manufacturers' Association, there will be published periodically in INDUSTRIAL CANADA a summarized statement showing the quantity and value of the various classes of manufactured goods imported into this country.

The returns for six months ending December, 1904, are presented below. Owing to the limited space available, it has been found necessary to abbreviate the list as much as possible. To this end there has been more or less grouping of commodities in the case of certain lines where the official returns show a tendency to minute classification, while a number of items have been omitted from the statement altogether. The latter is true, however, only of those articles which have been imported in such small quantities as to appear insignificant, or which have not come into direct competition with goods made in Canada.

The Committee will be glad to receive suggestions as to other features which it may be deemed desirable to incorporate in future statements of this kind, or to supply further information with regard to any item mentioned in this list. Enquiries addressed to the Secretary, Canadian Manufacturers' Association, Toronto, will receive prompt attention.

ARTICLE.	QUANTITY.	VALUE.
Ale, beer and porter	321,877 galls	$164,366
Ginger ale		5,576
Baking powders	195,212 lbs.	59,383
Baskets of all kinds		32,729
Belting (except rubber and leather)		33,774
Belts		30,669
Belts and gongs		20,849
Boats and canoes	266	17,401
Books and Printed Matter—		
Books, periodicals, novels and paper books		629,617
Bank notes and lithographed matter		47,371
Posters, folders, etc	288,123 lbs.	73,609
Printed music		53,914
Boots and shoes		609,578
Brass wire	49,549 lbs.	7,987
Brass goods		304,383
Biscuits		276,878
Bricks and tiles		197,262
Brushes		171,233
Carriages and Vehicles—		
Buggies and carriages, sleighs and parts		84,045
Farm waggons and drays	1,347	78,915
Railway and box cars and parts		239,467
Wheelbarrows and trucks		49,947
Bicycles, tricycles and parts		31,819
Cash registers	801	124,963
Portland cement	1,916,336 cwt.	740,919
Clocks, clock keys and clock movements		171,762
Coffee, roasted or ground and imitations	214,974 lbs.	35,937
Collars	91,149 doz.	84,019
Copper goods		54,484
Cordage and twine	705,043 lbs.	84,209
Corsets		45,551
Cotton, Manufacturers of.		
Cotton, duck	104,999 yds.	21,740
Cotton embroideries		152,276
White or bleached cotton	7,415,266 yds.	545,588
Printed and colored cotton	13,830,548 yds.	1,441,841
Cotton yarn	116,656 lbs.	29,500
Cotton sheets, etc		70,373
Cotton shirts	15,901 doz.	74,109
Cotton clothing		213,689
Cotton blouses and waists		8,093
Cotton bags (made by needle)		28,362
Cotton towels		24,509
Cuffs	12,759 pairs	1,625
Curtains		245,158
Electric apparatus, batteries and telegraph instruments, etc		938,097
Embroideries		41,402
Emery		15,493
Feathers		20,124
Fertilizers		50,229
Furniture		336,524
Fur skins (wholly or partially dressed)		434,726
Fur caps, etc		92,947
Glassware—		
Cut glass and table ware		179,877
Lamp chimneys and globes		57,686
Ornamental glass		15,248
Common window glass	10,798,077 sq. ft.	255,698
Plate glass not bevelled	507,010 sq. ft.	147,505
Plate glass, bevelled	146,896 sq. ft.	9,490
Gloves and mitts		527,168
Gold and Silver Manufactures of—		
Electro-plated and gilt ware		178,464
Silverware		73,531
Grease, axle	455,181 lbs.	14,798
Gunpowder, etc	118,982 lbs.	53,772
Ammunition		141,050
Gutta percha boots		80,754
Gutta percha belting		32,425
Gutta percha clothing		87,412
Hats, beaver, silk and felt		652,787
Hats, straw, etc		177,872
Ink, writing		35,798
Ink, printing		52,902
Iron and Steel.		
Agricultural implements and parts, as follows		809,423
Drills, grain seed	574	27,948
Harvesters, self-binding	3,432	342,023
Mowing machines	1,505	50,484
Ploughs	2,722	66,765
Reapers	252	10,653
Spades and shovels	6,762	20,371
Anvils and vices		21,720
Springs, axles, etc	11,495 cwt.	27,943
Bar iron or steel rolled	284,580 cwt.	418,998
Butts and hinges		22,736
Castings in the rough		126,520
Canada plates, Russia iron, terne plate, rolled sheets of iron, etc	168,897 cwt.	337,027
Cast iron pipe	146,009 cwt.	231,828
Cast scrap iron	3,059 tons	32,346
Chains		121,076
Tacks, shoe	22,194 lbs.	2,006
Cut tacks, brads, etc	30,713 lbs.	2,151
Locomotives		563,849
Fire engines	9	4,845
Fire extinguishing machines		19,528
Gasoline engines	314	66,604
Steam engines and boilers	566	229,907

Article.	Quantity.	Value.
Fittings for iron or steel pipe	3,592,201 lbs.	192,988
Forging, shafting and hammered bars	1,623,341 lbs.	62,294
Iron hardware		300,611
Iron or steel ingots	256,500 cwt.	114,028
Bridges and structural work	157,699 cwt.	392,432
Iron and pigs	40,577 tons	473,878
Locks		88,285
Machines, Machinery—		
Automobiles	116	102,266
Windmills	401	19,700
Ore crushers, rock drills, cranes, derricks, etc		69,422
Portable engines	304	309,314
Threshers and separators	497	139,501
Portable machines and parts		152,146
Sewing machines and parts		122,500
Slot machines	785	11,038
Typewriting machines	1,358	74,927
Other machinery		2,287,895
Iron castings	1,074 cwt.	4,365
Nails and spikes	4,064,479 lbs.	92,694
Pumps		89,662
Railway bars and rails	6,569 tons	156,991
Railway fish plates, etc	4,621 tons	150,272
Rolled plates	1,066,043 cwt.	1,687,973
Safes and doors for safes		47,893
Screws	51,009 gross	9,584
Scales		46,216
Sheets, galvanized		433,399
Sheets, corrugated, galvanized	3,691 cwt.	7,487
Sheets, corrugated, not galvanized	1,063 cwt.	1,746
Skates	100,513 pairs	47,590
Skelp iron or steel	317,449 cwt.	350,568
Stoves		194,068
Switches and frogs	6,531 cwt.	25,312
Boiler tubes of wrought iron		168,436
Tubing		418,345
Ironware		154,211
Wire cloth or woven wire	509,406 lbs.	21,000
Wire screens, doors and windows		2,122
Wire fencing	196,796 lbs.	8,688
Wire, covered	1,881,964 lbs.	234,561
Wire rope and picture wire	1,060,809 lbs.	81,597
Wire of all other kinds	3,691,034 lbs.	89,964
Nuts, washers, rivets, etc	1,797,429 lbs.	60,773
Scrap	94,069 cwt.	58,145
Cutlery—		
Pen knives		91,467
Table cutlery		129,310
Other cutlery		113,849
Firearms		253,138
Needles		46,144
Steel plate, universal mill or rolled edge bridge plates	58,436 cwt.	86,323
Steel of greater value than 2½ c. per lb	61,115 cwt.	317,761
Tools and Implements—		
Adzes, cleavers, hammers, etc		25,721
Axes	3,129 doz.	16,989
Saws		84,080
Files and rasps		41,826
Other tools, hand or machine		385,428
Other manufactures composed wholly or in part of iron and steel		1,153,009
Jellies and jams	702,755 lbs.	52,801
Jewellery		452,045
Knitted goods		766
Leads and Manufactures of—		
Lead, old, scrap, pig and block	40,506 cwt.	86,627
Lead bars and sheets	8,853 cwt.	22,819
Lead pipe	56,186 lbs.	3,093
Shot and bullets	27,467 lbs.	965
Lead manufactures		32,418
Leather and Manufactures of..		
Sole leather	249,841 lbs.	55,832
Belting leather	91,259 lbs.	34,197
Harness leather	6,216 lbs.	2,529
Upper leather, dressed, waxed or glazed	87,647 lbs.	76,015
Japanned, patent or enamelled leather and morocco leather	22,512 lbs.	20,793
Other leather and skins	103,377 lbs.	30,822
Other leather and skins dressed, waxed or glazed	41,469 lbs.	12,016
Harness and saddlery		42,517
Leather belting		28,631
Other manufactures of leather and raw hide		87,215
Lime	45,897 bbl.	33,635
Lime juice, etc	6,906 galls.	7,177
Malt	61,427 bush.	46,693
Marble, sawn only		39,827
Marble, rough		2,759
Manufactures of marble		19,945
Mattresses		2,734
Mats and rugs		120,246
Metals.		
Aluminum, manufactures of		8,437
Babbit metal		15,739
Britannia metal		12,210
Buckles		27,835
Gas, electric fixtures, etc		160,051
Gas meters	1,941	21,366
German, Nevada and nickel silver, manufactures of, not plated		18,297
Lamps and lanterns		188,657
Nickel plated ware, N.E.S.		50,835
Stereotypes, electrotypes, celluloids for almanacs, etc	172,534 sq. in.	6,101
Type for printing		41,217
Milk, condensed	68,241 lbs.	4,718
Mineral Substances—		
Asbestos and manufactures of		61,660
Plumbago, ground manufactured		6,080
Minerals and aerated waters		98,350
Mucilage		10,247
Musical Instruments—		
Brass band instruments		15,745
Cabinet organs	97	5,106
Parts of organs		9,226
Pianofortes	320	58,595
Parts of pianos		66,296
Other musical instruments		73,157
Mustard, ground		56,998
Oils.		
Mineral Oils—		
Coal and kerosene, distilled, purified or refined, naphtha and petroleum	6,140,268 galls.	581,645
Products of petroleum	453,392 galls.	51,958
Crude petroleum, gas, oils, other than benzine and gasoline	61,811 galls.	3,342
Vegetable Oils—		
Cotton seed	332,195 galls.	84,408
Flaxseed or linseed, raw or boiled	611,173 galls.	168,539
Olive	36,996 galls.	31,361
Other vegetable oils	25,241 galls.	15,159
Lubricating oils	1,024,229 galls.	163,830
Essential oils	72,754 lbs.	56,682

Article.	Quantity.	Value.
Other oils	29,319 lbs.	14,718
Oilcloth, cork matting, etc	645,425 sq. yds.	228,210
Spectacles and eyeglasses		6,420
Spectacle frames		21,003
Paints and Colors.		
Colors, dry	1,141,155 lbs.	57,767
Dry, white and red lead	8,644,727 lbs.	309,941
Ochres, ochrey earths and siennas	480,585 lbs.	4,351
Orange mineral and zinc white	1,745,646 lbs.	64,200
Oxides, fire proofs, etc	856,927 lbs.	10,181
Paints and colors, and rough stuff and fillers, anti-corrosive and anti-fouling paints, ground and liquid paints	2,375,460 lbs.	121,994
Paper and Manufactures of.		
Albumenized paper		64,586
Bags or sacks		30,260
Playing cards	313,151 packs	32,697
Card board		43,887
Envelopes		41,296
Paper, felt or straw board		76,845
Hanging and wall paper	445,988 rolls	39,026
Pads not printed, papier mache ware and manufacturers of paper		394,287
Printing paper	4,084,425	232,614
Ruled, border and coated papers and papeteries		88,661
Wrapping paper	621,807 lbs.	22,214
Other kinds of paper		99,378
Pens, penholders and rulers		89,373
Perfumery		59,271
Photographic dry plates		32,604
Picture and photograph frames		52,998
Pickles		119,417
Plaster of Paris or gypsum, calcined or manufactured	25,925 cwt.	14,140
Pocket books, purses and cases		110,600
Polish		27,502
Printing presses, machines, etc		156,587
Provisions.		
Lard	202,969 lbs.	17,877
Lard compounds, cottolene and animal stearine	22,946 lbs.	1,983
Bacon and hams	1,966,454 lbs.	246,624
Beef, salted in barrels	717,315 lbs.	30,448
Canned meats and game	417,548 lbs.	51,506
Extracts of meats, fluid beef not medicated, soups		47,553
Pork, barrelled in brine	1,902,589 lbs.	133,105
Dried or smoked meats	225,642 lbs.	25,753
Other meats salted	43,254 lbs.	3,349
Ribbons		500,478
Railway and travelling rugs, etc		24,713
Salt, coarse and fine	10,391,130 lbs.	30,794
Sand paper, etc		37,269
Sauces and catsups	53,611 galls.	56,324
Signs		23,441
Silk—		
Blouses and shirt waists		17,988
Clothing		131,524
Sewing and embroidery silk and silk twist		19,134
Velvets, velveteens, plush fabrics	430,772 yds.	200,841
Slate and manufactures of—		
Roofing slate	7,424 squares	31,322
School slates		11,315
Other manufactures		11,189
Soap—		
Common or laundry	626,761 lbs.	33,233
Castile	727,351 lbs.	35,142
Common, soft and liquid	72,441 lbs.	2,507
Toilet		86,325
Pearline and soap powders	955,428 lbs.	40,934
Other soaps	263,714 lbs.	23,630
Spices, ground	198,408 lbs.	16,865
Ginger, preserved	66,079 lbs.	5,337
Spirits.		
Methyl alcohol, wood alcohol, wood naphtha, methylated spirits, etc	261,543 galls.	53,510
Brandy	182,648 galls.	289,868
Gin	371,631 galls.	183,559
Rum	70,194 galls.	30,309
Whiskey	288,333 galls.	452,023
Alcoholic perfumes	3,991 galls.	68,320
Starch	493,589 lbs.	20,665
Stone and manufactures of—		
Flagstones, granite, rough building stones, etc	10,002 tons.	28,372
Building stone, dressed	8,119 tons	36,375
Granite, sawn	1,400 tons.	8,123
Granite, manufactures of		41,111
Grindstones		28,245
Paving blocks		24,215
Other manufactures of stone		8,569
Sugar—		
Sugar, refined	11,377,510 lbs.	316,786
Sugar, unrefined	167,798,354 lbs.	3,414,407
Molasses and syrups	2,318,078 lbs.	203,499
Sugar candy, pop corn, etc	1,414,397 lbs.	176,152
Tape lines		9,367
Teeth, artificial		28,682
Tinware		77,808
Tobacco—		
Cigarettes	9,083 lbs.	21,568
Cigars	49,240 lbs.	168,754
Tobacco, pipes, cigar holders, smokers' sets, etc		243,180
Trunks, valises, etc		41,030
Turpentine, spirits of	387,420 galls.	206,956
Twine, manufactures of		3,473
Umbrellas, parasols, etc		20,789
Varnish, japans, etc	34,120 galls.	60,710
Vinegar	63,012 galls.	22,080
Watches		48,235
Watch cases		41,929
Watch actions and movements		416,536
Watch glasses and keys		3,561
Wax, paraffine	53,311 lbs.	4,394
Wax and manufactures of		31,936
Whips		5,927
Window shade rollers		12,256
Window shades	50,823 sq. yds.	8,303
Wood and Manufactures of.		
Barrels	22,139	22,540
Caskets and coffins		10,302
Lasts		24,950
Mouldings		28,503
Show cases	701	9,857
Woodenware		16,642
Pails and tubs		34,050
Other manufactures of wood		455,525
Boards, planks, etc	6,696 M ft.	99,854
Lumber and timber	2,785 M ft.	32,837
Umbrella handles, etc		6,503
Walking sticks, etc		9,197
Wood pulp		38,352

Article.	Quantity.	Value.
Wool, Manufactures of.		
Woolen goods of all kinds as follows		7,396,952
Blankets	259,417 lbs.	76,772
Cassimeres, cloths, etc	1,228,359 yds.	814,192
Coatings and overcoatings	896,284 yds.	572,100
Tweeds	1,728,280 yds.	922,170
Flannels	450,050 yds.	83,290
Knitted goods		151,758
Bed comforters and counterpanes		14,104
Shawls		60,330
Shirts	2,643 doz.	18,374
Socks and stockings	248,960 doz. pr.	475,275
Undershirts and drawers		120,010
Yarns	812,983 lbs.	355,335
Fabrics and manufactures of worsted wool		2,082,994
Unfinished goods	219,965 sq. yds.	44,550
Women's and children's outside garments		468,785
Ready made clothing		432,719
Carpets, Brussels	301,017 yds.	188,290
Felt, pressed	349,308 lbs.	93,590
Shoddy	188,530 lbs.	12,593
Zinc, manufactures of		4,985

Export Directory.—The 1905 edition of *The Export Merchant Shippers of Great Britain and Ireland* has just made its appearance. The general arrangement of this volume remains the same, though a few new features have been added which will serve to make it more valuable than ever as a book of reference. It aims to give in concise form a selected list of the exporters and manufacturers of the United Kingdom. These names are arranged alphabetically under towns, and are also indexed according to class of goods handled. A list of trade marks, shipping and forwarding agents, steamship companies, and Lloyd's agents throughout the world form other features of interest.



Interior view of section of factory.






FROM somewhat crude material or from more finished stock we manufacture the very finest products. Splendid samples are to be seen in hundreds of the best manufacturing, financial and mercantile offices in the Dominion. We are doing a work not duplicated in any similar concern in Canada. We gather material from Vancouver to Halifax and distribute our product over the same area. We take Public School students, Teachers or University graduates, and in a short time and at little expense we make them of special commercial value to employers. Full particulars as to process, time, cost, etc., cheerfully furnished. Handsome Catalogue free. Write the

Central Business College

TORONTO.

W. D. Shaw, Principal.

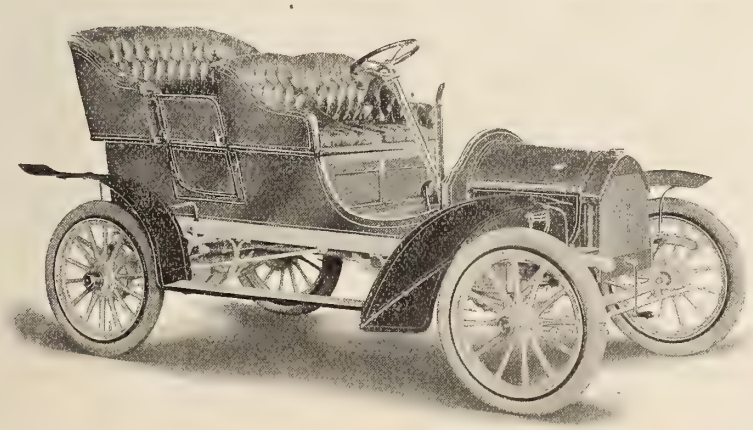







W. D. Shaw.

THE "RUSSELL"



This "Made in Canada" Car is a big success. It has power, good lines, is luxurious in finish and appointments, but best of all it can stand the rack and wear of Canadian Roads. It's a Car built particularly for Canadian Roads—The "Russell."

Specifications: 12 to 14 horsepower, double cylinder opposed engine—situated under the bonnet in front, driving through a slide gear transmission with three speeds forward and one reverse. Bevel gear drive direct to rear axle. 90 inch wheel base. Wheels 30 x 3½ inches. Gasoline capacity for two hundred miles. Body of handsome design, with side entrance tonneau, which is also easily detachable, so as to be used for runabout purposes. Color—Ultramarine blue body with light running gear.

Equipment: Two oil lamps, tail lamp, horn, and ten thousand mile odometer. **Price, $1,500.**

WRITE FOR CATALOGUE—

Canada Cycle and Motor Co., Limited

AUTOMOBILE CORNER (Bay and Temperance Streets) - - TORONTO.

STEEL BUILDINGS



We are prepared to design and erect STRUCTURAL STEEL WORK OF ALL DESCRIPTIONS, including STEEL BUILDINGS, BRIDGES, JIB and TRAVELLING CRANES, SMOKE STACKS, STAND PIPES, WATER TANKS and RIVETED STEEL PLATE WORK.

CANADA FOUNDRY CO., LIMITED

Head Office and Works: TORONTO, ONT.

DISTRICT OFFICES:

MONTREAL HALIFAX OTTAWA WINNIPEG CALGARY VANCOUVER ROSSLAND

SHEET METAL BUILDING MATERIALS

Fireproof Glass Windows
Hollow Sheet Metal Sash and Frames
Metallic Ceiling
Corrugated Iron
Fireproof Shutters

Embossed Metal Doors
Skylights and Ventilators
Eastlake Steel Shingles
Diamond Tiles
Building Paper

Sheet Metal Cornices
Metal Store Fronts
Rock Faced Steel Siding
Empire Steel Shingles
Standing Seam Roofing

Our new $10,000.00 Catalogue now ready—Would you like to have one?

The METALLIC ROOFING CO.
OF CANADA, LIMITED

MANUFACTURERS - CONTRACTORS - EXPORTERS

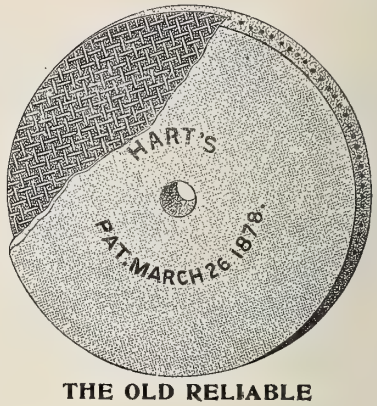
TORONTO, CANADA

20 YEARS' EXPERIENCE

Cable Address: "METALLIC," Toronto A. B. C. and Private Codes used

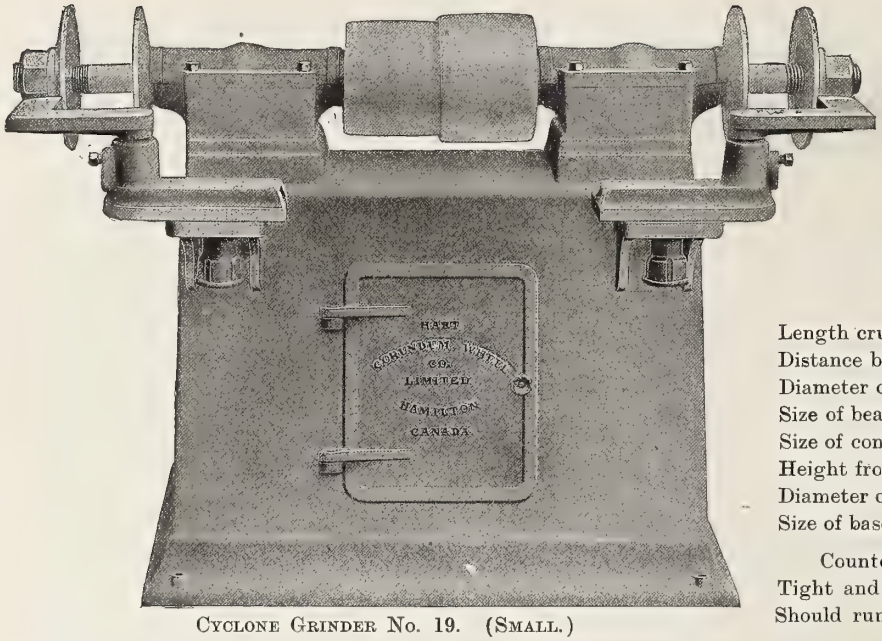
Hart Corundum Wheel Co., Limited

HAMILTON, CANADA



THE OLD RELIABLE

MAKERS OF CRAIG MINE CRYSTAL CORUNDUM WHEELS



CYCLONE GRINDER No. 19. (SMALL.)

CYCLONE GRINDER
No. 19

Built on Scientific Principles

Bearings absolutely DUST PROOF Automatic Oilers

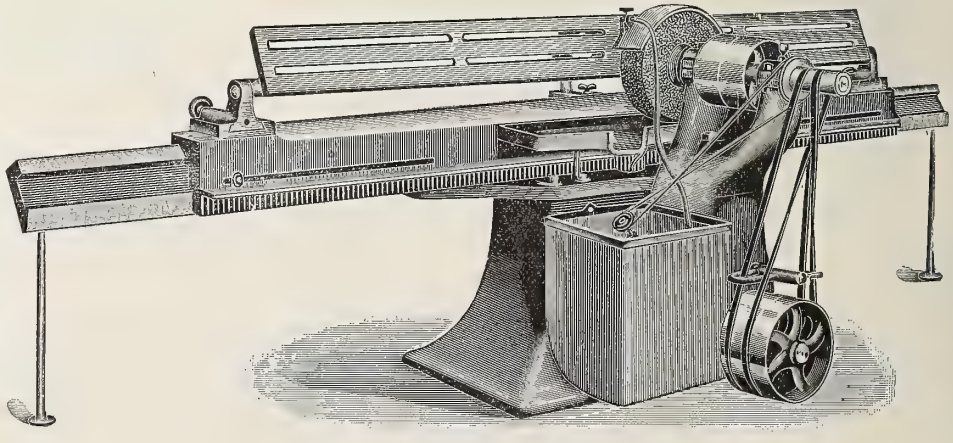
To carry 2 wheels 20 to 30 in. dia., 4 in. thick.

Length crucible steel arbor	57 inches
Distance between wheels	45 "
Diameter of arbor between collars	2 "
Size of bearings	12x2 1/16 "
Size of cone pulley on arbor	8 and 9x6½ "
Height from floor to centre of arbor	34 "
Diameter of collar	10 "
Size of base	31x41 "

Countershaft has cone pulleys 17 and 18x6½. Tight and loose pulleys 8 in. diameter, 7 in. face. Should run 450 revolutions per minute.

KNIFE GRINDERS.

One advantage which our Knife Grinders possess over other low-priced machines is that they will grind the knife either with a perfectly flat bevel or with a concave bevel of any curve. The mere loosening of one nut gives the operator power to change the grinding instantaneously from flat to any degree of concave desired.



AUTOMATIC KNIFE GRINDER.

Prices on application. Catalogue free for the asking.

THE HEATING and VENTILATION of FACTORY BUILDINGS with The Canadian Buffalo Fan System



These Shops Heated with Fan System.

Economical to install, as first cost is lower that any other system of equal capacity.

Economical to operate, because it utilizes exhaust steam with no back pressure, and because it may be shut down at night and it will raise the temperature quickly in the morning.

Economical to maintain, because there are no repairs and a "freeze up" is impossible.

Canadian Buffalo Forge Co., LIMITED

Office and Factory - - MONTREAL, QUEBEC.

Export Orders Filled with Despatch

DRY COLORS

Cable Address "Pure" Western Union Code

WE ARE NOW IN A POSITION TO FILL ORDERS FOR OUR MINERAL AND VEGETABLE PIGMENTS AND DRY COLORS, ALSO FLEXIBLE PASTE COLORS PRODUCED BY OUR PATENT PROCESS.

WE GUARANTEE THESE COLORS TO HAVE A PERMANENCY AND DURABILITY FAR SUPERIOR TO ANYTHING HERETOFORE MADE.

SAMPLES AND QUOTATIONS CHEERFULLY FURNISHED.

PURE COLOR COMPANY, LIMITED.

OFFICE AND WORKS

HAMILTON . . . . CANADA

Headquarters for Greases

Cable Address "Campbell"

We manufacture greases of all descriptions for every known purpose



Cup and Motor Greases
Hot and Cold Neck Grease
Journal and Roller Greases
Harness Oil
Harness Oil Blacking
Harness Soaps
Leather preservers and belt dressings.

The above goods are put up in attractive lithographed packages.

The Campbell Mfg. Co., Limited

Hamilton, Canada

ARE YOU GETTING YOUR SHARE ?



THE

DODGE

STANDARD

WOOD SPLIT PULLEY

IS

MANUFACTURED IN CANADA

BY

DODGE MANUFACTURING CO.

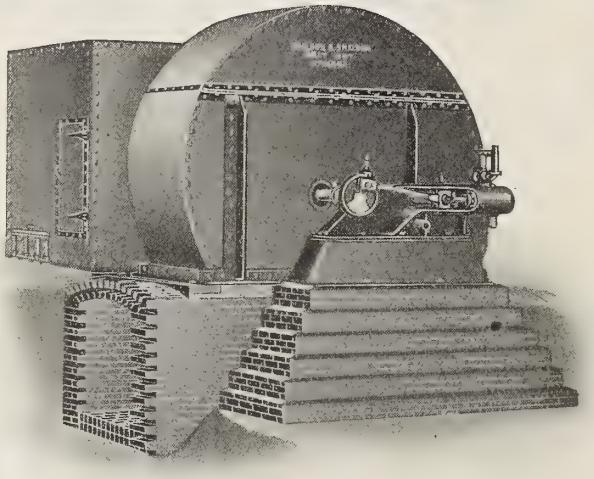
OF TORONTO, LIMITED.

TORONTO, ONT. Montreal Branch : 419 ST. JAMES ST.

LARGEST STOCKS IN CANADA.

SHELDON & SHELDON, GALT, ONT.

Hot Blast Heating Systems
for
Schools, Colleges, Public Buildings, Warehouses, Factories, Tanneries, Railway Shops, Car Sheds and Round Houses.



Mechanical Draft Systems
for
Boiler Plants, Power Houses and Steamships.

Drying Systems
of all kinds and for all materials.

Pneumatic Conveyors and Refuse Removers designed and installed.

HEATING AND VENTILATING ENGINEERS

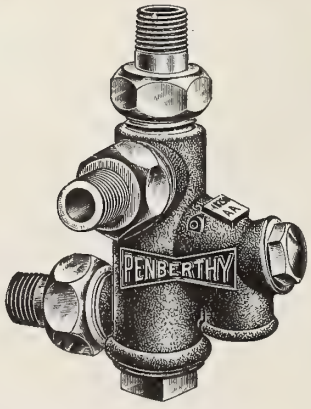
WRITE FOR OUR SPECIAL CATALOGUES. PLANS AND ESTIMATES FURNISHED ON REQUEST.

GENUINE
TRADE
PENBERTHY
MARK

"SALUTE"



Snap Lever Sight Feed Oiler.



"SULTAN"



Gas Engine Cylinder Oiler.

AUTOMATIC INJECTOR

The Chapman Double Ball Bearing

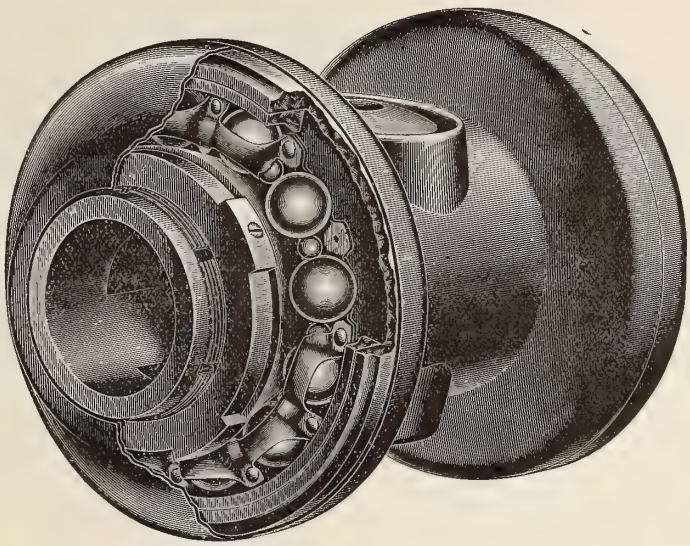
100 PLANTS EQUIPPED IN CANADA

A Bearing Simple in Construction and Practical in Operation

"As near as we can estimate there is, we should think, at least fifty per cent. saving in power with the Chapman bearings.

"ALABASTINE CO., LTD.,
"Paris, Ont."

Durability and Economy of Operation Secure its Adoption



A Bearing having the Highest Known Efficiency as a Power Saver

"We are of the opinion, in our case, that we save at least twenty per cent. in power with the Chapman Double Ball Bearing, and we also find a great saving in oil. The bearings are also clean; we have no oil running down hangers, posts, etc.

"Yours truly,
"McLAUGHLIN CARRIAGE CO., LIMITED,
"Oshawa, Ont."

We Guarantee You a Saving of 75 per cent. of Your Shaft Friction

THE CHAPMAN DOUBLE BALL BEARING CO. OF CANADA, LIMITED

Office—39 Scott Street. Factory—39 Pearl Street, TORONTO

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We show Manufacturers' Samples to the Trade throughout the British Empire through the Services of Competent Salesmen.

We Pay for all Purchases HERE.

We will Quote Through Rates of Freight to any part of the World.

Correspondence Invited.

Coal Handling Machinery



Pivoted Bucket Carrier (Patented)

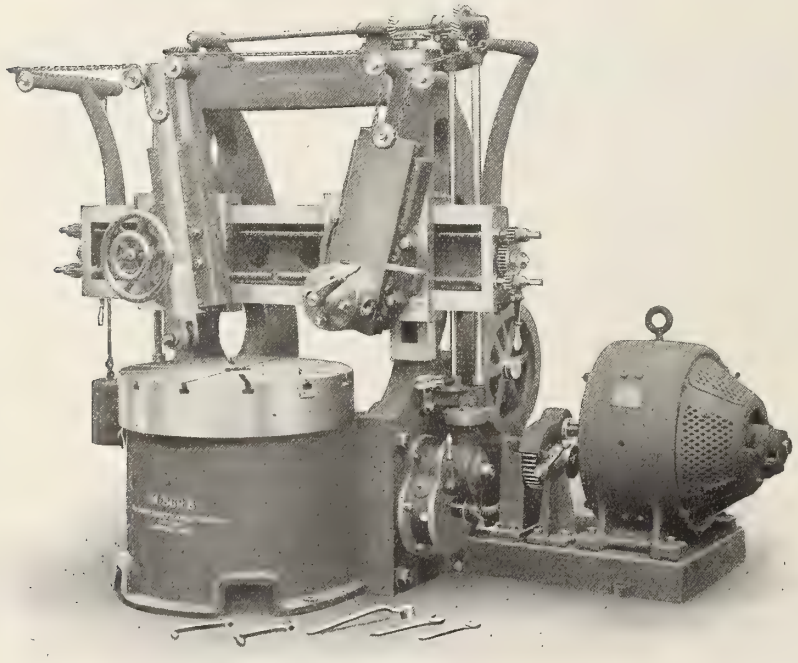
Anthracite and Bituminous Coals of all sizes can be stocked and reloaded more rapidly, with less expense and less breakage, than by any other method.

SEND FOR OUR NEW 15c. CATALOG.

Coal is delivered from track hopper by feeding apron to crusher and from thence delivered by carrier into bunkers "A." The carrier also delivers the ashes from boilers into ash pocket "B," from which it is spouted into car on track "C."

The Waterous Engine Works Co., Limited - BRANTFORD, CANADA.

Bertram Rapid Production Mill



CRITICALLY examine our 42-inch Mill—you will find every line indicates strength, proportion of parts, and convenient methods of operating. From the bed to the bridge at top of standards shows it was designed for present day requirements with enough rigidity to provide for future developments of high speed steel. Our 42-inch mill weighs 14,000 lbs., made of the best material, every pound properly distributed from knowledge gained by forty years' experience, which accounts for Bertram's Mills being installed in the largest Canadian factories in preference to the best made American machines.

Our Line of Mills Ranges from 30 to 168 inches.

Descriptive Circulars for the Asking.

The JOHN BERTRAM & SONS CO., Ltd.

DUNDAS, ONTARIO, CANADA.

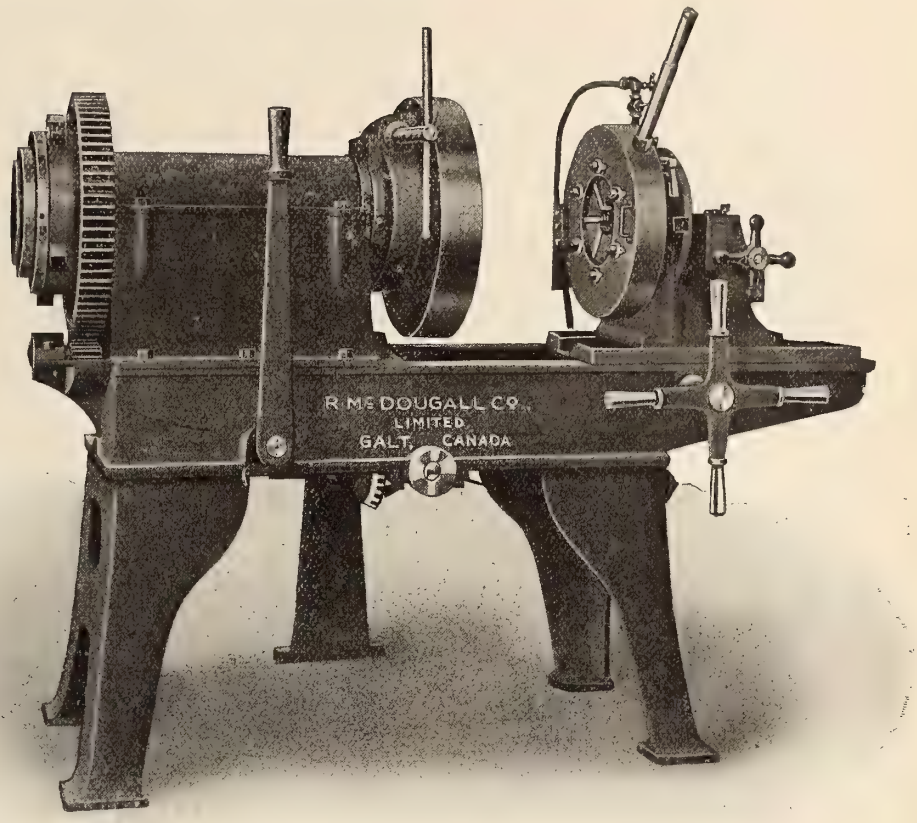
This machine will cut a perfect thread on a 6-inch pipe with one cut.

We make smaller sizes, which also do perfect work, according to capacity.

If you cut pipe the working of these machines will please you.

Circulars on request.

Built like a Machine Tool.

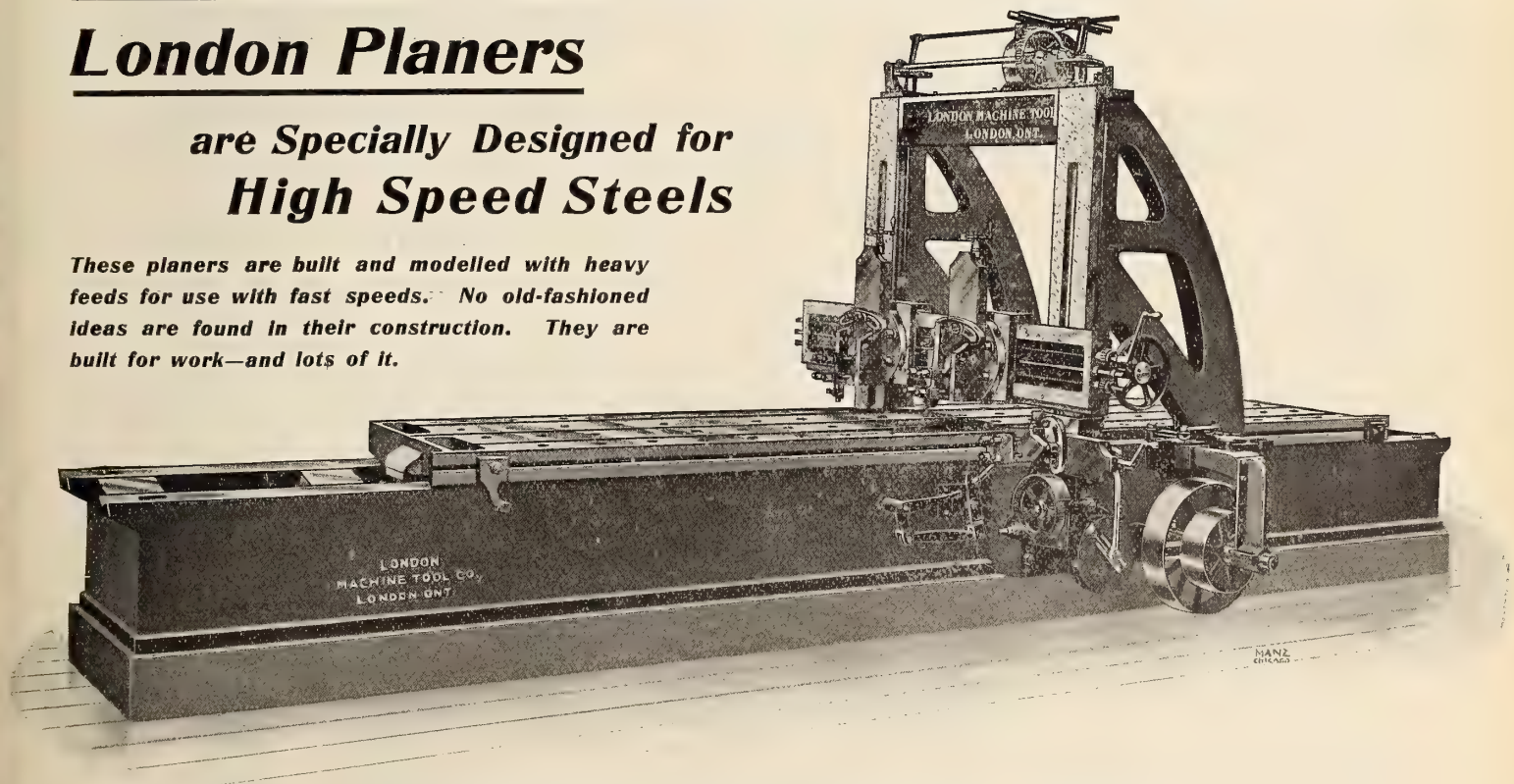


The R. McDougall Co., Limited, GALT, CAN.

London Planers

are Specially Designed for High Speed Steels

These planers are built and modelled with heavy feeds for use with fast speeds. No old-fashioned ideas are found in their construction. They are built for work—and lots of it.



THE LONDON MACHINE TOOL CO.,

LONDON, ONT., CAN.



A Successful Railway Roller Bearing

AS PROVEN BY THE FOLLOWING:

THE HENDERSON ROLLER BEARING MANUFACTURING CO., LIMITED, HAMILTON, CANADA, 27th August, 1904.
785 King Street West, Toronto, Ont.

GENTLEMEN,—*Re Working of Bearings on Freight Car.* Your Roller Bearings have been in operation on our heaviest car since shipment of trucks to us some ten months ago, and are giving perfect satisfaction. We find on examination the condition of the Bearings is as good as when they were installed. We have placed them on our heavy freight car so as to give them the severest test possible on our system. The length of our freight car is 58ft., weighs about 15 tons, and carries from 15 to 18 tons of freight, running over 108 miles daily.

We find that the car coasts fully one-third farther than the other cars. We have had no hot boxes since installation, and have saved 90 per cent. of the amount of oil required by the ordinary journals, while no waste is required and no time lost replacing brasses and packing, besides avoiding the drip of oil which is so evident in the ordinary stuffbox.

Judging from results up to date the Bearings will not require renewing for years. We expect to have all our heavy cars equipped as soon as possible.

Yours truly, (Signed) HAMILTON, GRIMSBY & BEAMSVILLE ELECTRIC RY. CO.
GEO. E. WALKER, Manager.

THE GRAND VALLEY ELECTRIC R.R. have several cars already in use, and expect to equip throughout their whole system.
THE TORONTO RAILWAY CO. are now using them and are delighted with them.
In use in scores of factories in Canada from east to west. Also on Vehicles, etc.
As the present premises are overtaxed in filling orders, a site has been secured on King St., west of Subway, where a new factory will shortly be erected.

ALL BEARINGS GUARANTEED

THE HENDERSON ROLLER BEARING MANUFACTURING COMPANY, Limited

Head Office: 403 TEMPLE BUILDING, TORONTO. Factory: 785 KING ST. WEST.

Nova Scotia Steel & Coal Co.

LIMITED

HEAD OFFICE: NEW GLASGOW, NOVA SCOTIA

STEEL WORKS = TRENTON, N.S.
BLAST FURNACE = = FERRONA, N.S.
IRON MINES = = WABANA, NFLD.
COLLIERIES = = SYDNEY MINES, N.S.

"OLD SYDNEY COAL"
(Shipping Port, - North Sydney)

ADDRESS ALL CORRESPONDENCE TO HEAD OFFICE

POLSON IRON WORKS
TORONTO

MARINE ENGINES---Simple, Compound and Triple Expansion

STATIONARY ENGINES---Brown Automatic Type

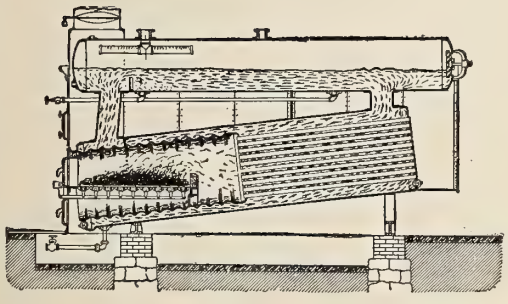
Horizontal Tubular Boilers and Tank Work a Specialty

Steel Vessels and Dredges of all Sizes

WORKS AND OFFICE

Esplanade Street East, - - TORONTO

REDUCE YOUR COAL BILL.



Your coal bill is a large item in your expense account, and if it could be reduced ten per cent. it would mean a large addition to your net profit.

A Robb-Mumford internally fired boiler will make a saving of a least ten per cent. over an externally fired boiler, and in some cases considerably more.

Robb Engineering Co., Ltd., Amherst, N.S.

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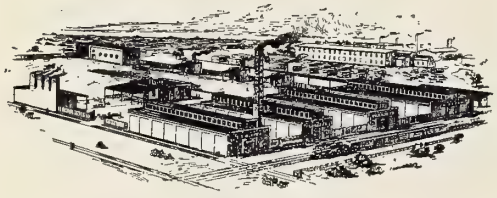
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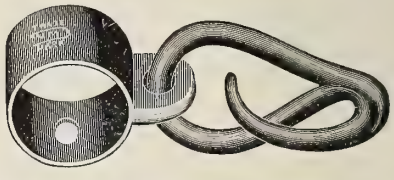
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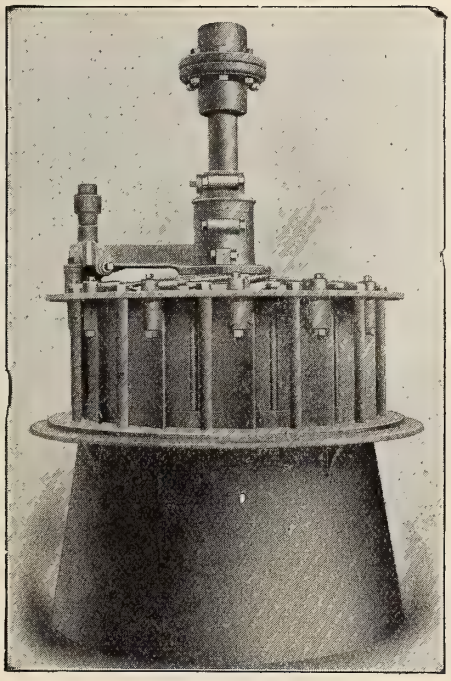
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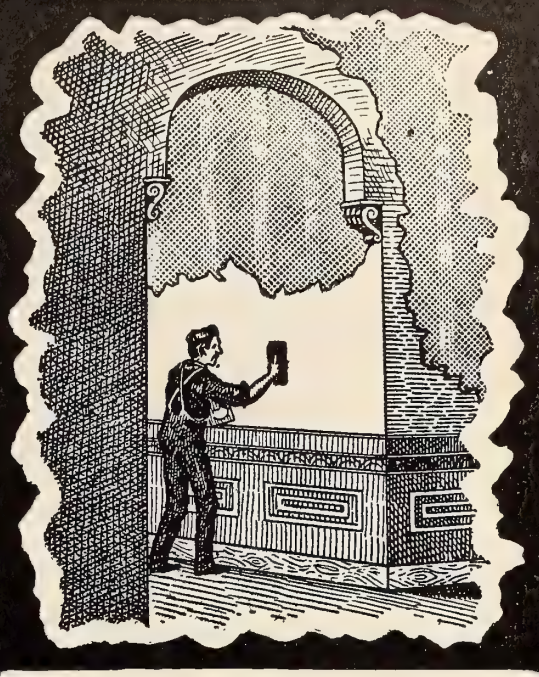
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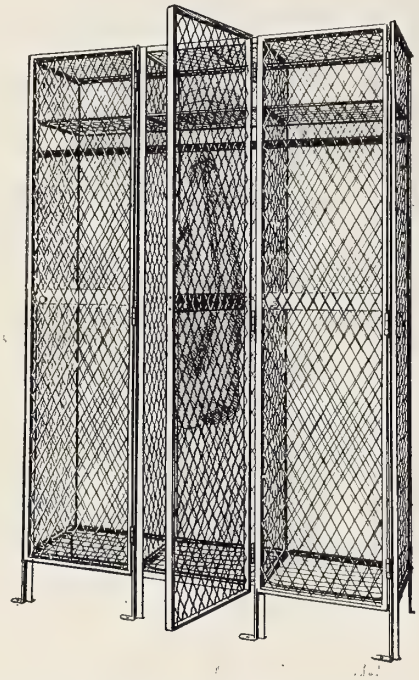
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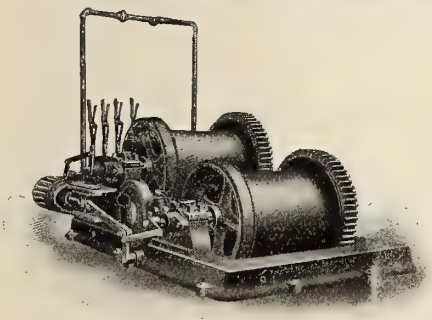
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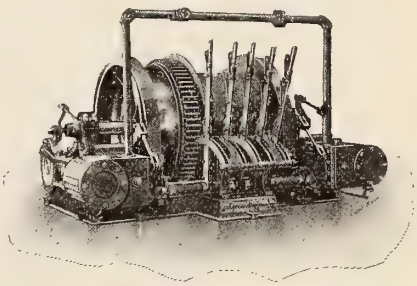


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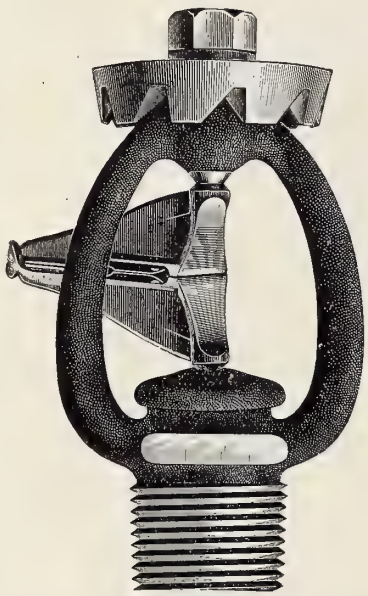
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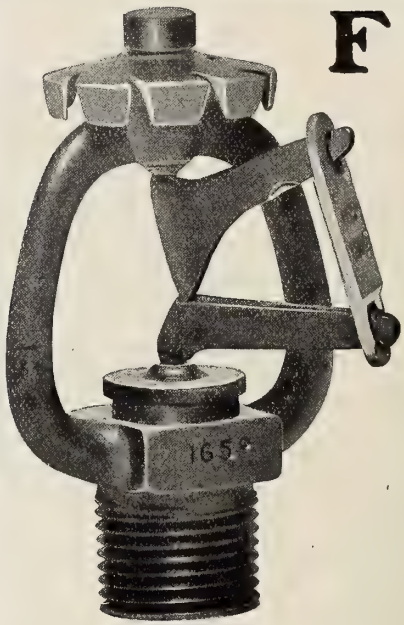
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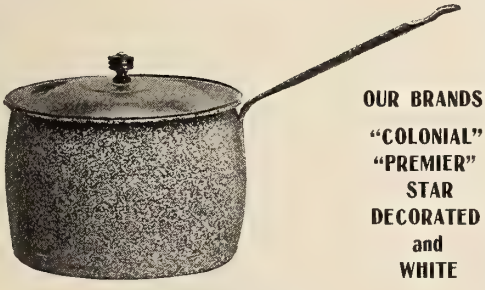
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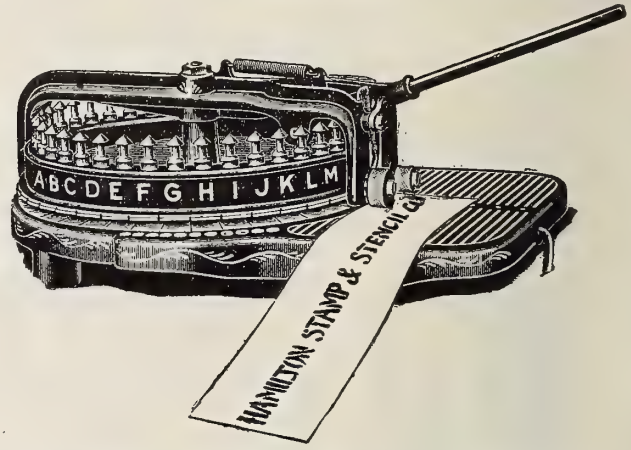
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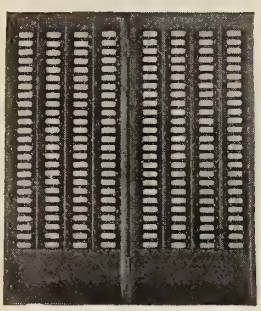
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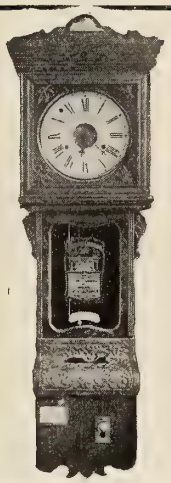
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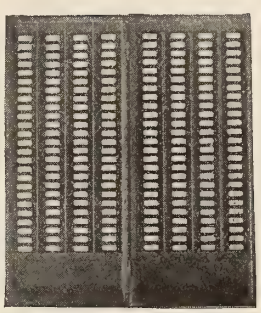
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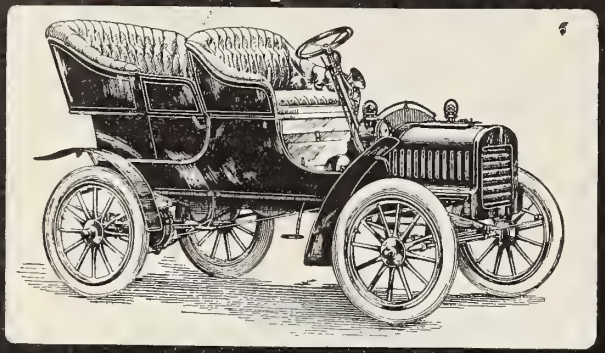
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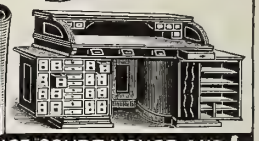
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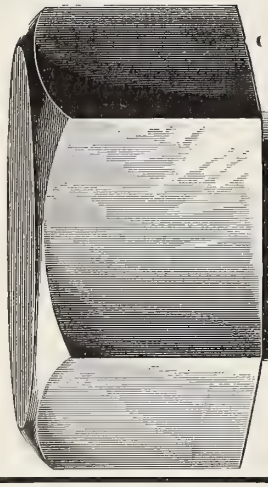


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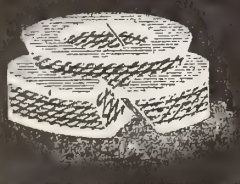
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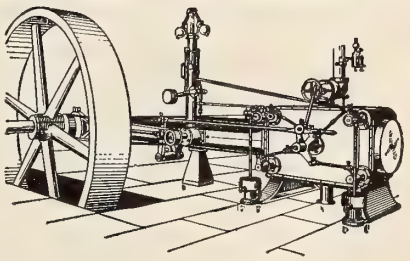
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A MONTHLY REVIEW OF MANUFACTURE AND COMMERCE

MAY, 1905

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THE present British Columbia Legislature, if it had done nothing else, has made itself notorious by passing an Act to impose a tax upon all commercial travellers representing firms non-resident in the Province. This is the most advanced type of Provincial legislation—in fact, its constitutionality has been questioned, and the business community in Canada is awaiting the decision of the Dominion Government. The Provinces have the right to levy direct taxes for the purpose of revenue, but they have no right to enact legislation which will regulate or restrict trade, and the measure referred to will undoubtedly prove a barrier between the people of British Columbia and the other Provinces.

Aside, however, from the constitutional aspect of the question, all such legislation is anti-national in tendency and unworthy of the support of patriotic Canadians. It was the aim of the fathers of Confederation to bridge the enormous distances which separated the scattered Provinces of the Dominion, and we have reached a time when we might have hoped that their desire was, in some measure, being fulfilled; but until our Provinces have shaken off their narrow provincialism, we cannot be a nation.

All extra-provincial legislation is a burden which the Dominion itself must carry as a restraint upon trade. Barriers have been erected so that companies chartered in any one Province are taxed in every other Province—even companies holding Dominion charters are taxed in various Provinces where they are trading the community as citizens and distributors of trade. True, the Provinces derive a revenue from such taxation, but what is this compared with the increased trade which might otherwise develop, and the untrammelled intercourse which should exist between the various Provinces and their people?

Let us hope, as Canadians, that we have seen the last instance of such provincialism in Canada, and let provincial statesmen remember that, as a people, we are too few and our country too immense, to afford such petty, yet dangerous, legislation.

THE MANITOBA FARMER AND THE DUTY ON LUMBER.

THE lumbermen of British Columbia are agitating for a duty of $2.00 per thousand on rough lumber, and 30 cents per thousand on shingles. In their efforts to secure this protection, they have received the sympathy and support of lumbering interests in every part of the Dominion. Recognizing the urgent necessities of the case, the press generally have adopted a most favorable view, and there can be no doubt that if the Government at Ottawa were to meet the wishes of the British Columbia millers, their action would have the approval of the public at large.

It is a matter of regret, therefore, that certain influential papers in Manitoba and the North-West are still maintaining a vigorous opposition to the proposed tariff. This opposition is based upon the false assumption that with such a tariff in effect, the price of lumber to the consumer would be increased by the exact amount of the duty. No one, of course, will wish to belittle the advantages of cheap lumber to an agricultural community, but the question may well be asked, to what extent has the free importation of lumber benefited the settlers in the Canadian North-West.

The manufacturer of lumber does not sell direct to the consumer but to the middleman. Naturally the middleman buys in the cheapest market. During the past year he bought in the neighborhood of twenty per cent. of his stock from the United States lumberman at a price, say, $2.00 per thousand less than the standard list price of the Canadian manufacturer. Was he philanthropic enough to give the struggling settler the benefit of this? Possibly had the volume of foreign purchases been larger, he might have been compelled to do so. But with eighty per cent. of the home consumption still supplied by the Canadian manufacturer, it was quite unnecessary for him to make any such sacrifice, so that the free importation of United States lumber, instead of benefiting the settler, simply enabled the middleman to make an additional profit out of him.

But assuming for the moment that the predictions of those who opposed the duty on lumber were fulfilled, and that the ...ool. . . .

to the consumer were increased by $2.00 a thousand, there are still good sound business reasons which would justify the settler in making the additional outlay. He would be more than compensated for the trifling expense by the permanent and increased market which he would secure for his produce. He already enjoys the home market, though he may not appreciate its value. He knows, however, that, thanks to the duty on butter, cheese, eggs, hams and bacon, all produce of this kind which he has to dispose of finds a ready sale in British Columbia. This same Province buys from eighty-five to ninety per cent. of its flour from the North-West; also immense quantities of hay, oats, horses and beef. Fully one-third of the population consuming these supplies in British Columbia is supported directly or indirectly by the lumbering industry.

Now if through failure to dispose of their production, it became necessary for the coast mills to close down, what would be the result so far as the Manitoba farmer is concerned? He would suddenly find his profitable market to the West taken from him; access to the markets to the south is already barred by the high tariff; his local market would still be too small to absorb what he had for sale, so that he would be forced to bear the expense of heavy transportation charges on his produce to Eastern Canadian points or to points beyond the sea.

It is of the first importance, therefore, to the Western farmer, that these British Columbia markets should be preserved, and he has it in his power to assist very materially in their preservation by demanding that he be supplied entirely with Canadian lumber.

A crisis in the British Columbia saw milling industry is now at hand. One or two mills are already in the hands of the sheriff. Half a dozen of the largest plants have been closed up and caretaker placed in charge. Scores of others are running on part-time, and all are more or less embarrassed through having to carry up their low grade lumber. The natural market, in fact the only market, for this material, is to be found in the prairie sections. This market is now being gradually destroyed through the dumping of United States lumber at a price lower than that which the coast millers have to pay for logs. In 1903, ten per cent. of the lumber used by Manitoba and the Territories came from the United States. Last year, this percentage was doubled. The Canadian miller is only asking for the same protection in his home market that the United States miller enjoys in his. Whether he survives the crisis or whether he goes down under the sweeping tide of imports depends upon the answer of the Government to his present petition.

A LESSON TO BOYCOTTERS.

THE announcement that the Gurney Foundry Company had won the first round in the fight against the St. Catharines unions would doubtless come as welcome news to every lover of British justice and fair play who had taken the trouble to follow the course of this extraordinary case. For years the company have maintained an unequal struggle against men whose actions have shown them to be devoid of all moral principle. Their business in St. Catharines has been wrecked; local merchants, under pain of being driven to the wall, have been compelled to cease offering Gurney goods for sale; builders have been obliged to throw up all contracts calling for Gurney supplies of any kind, and anything bearing the name of Gurney has been hounded out of the city with a zeal worthy of a nobler cause.

And why? All because some four or five years ago the Gurney Foundry Company decided to run their Toronto establishment as an open shop. In that establishment, the union man has long since been working side by side with the non-union man. Both receive good wages and work under satisfactory conditions. So far as can be learned they have no grievance, other than the ordinary one of a union man who is dissatisfied because the whole of the shop has not been placed in his hands. In this trifling difference the St. Catharines brotherhood are not primarily concerned, and yet, simply because Gurney goods have been placed upon the unfair list (and that too by men who are dishonourable enough to maim the hand that butters their bread) these same St. Catharines unions have maintained a most vigorous boycott against them, with the result that a once profitable trade has dwindled away to a mere nothing.

The laws of the land guarantee to every man the privilege of quitting a job which is not to his liking. The labor of the working man is the goods he has for sale. He is at perfect liberty to sell it where he chooses and at any price he can get for it. But the fact that the employer to whom he offers his labor does not choose to purchase it upon the terms named, does not give the working man the right to turn around and wreck that employer's business.

The result of the Gurney action will doubtless have a wholesome influence in impressing this fact upon Canadian labor unions, and in checking any further tendency to make use of the dangerous weapon provided in the boycott. The company who, single-handed and at great expense to themselves, have fought this matter through to a successful issue, deserve great credit for their courage and perseverance and have earned the hearty thanks of every employer of labor in this country.

NIAGARA POWER.

THE annual report of the Commissioners for the Queen Victoria Niagara Falls Park for 1904 contains an interesting résumé of the progress which has been made in the development of electrical power at Niagara since the appointment of the first Commission in 1887.

The splendid results which thus far have attended the policy laid down by the Board make their comments on the present situation of considerable value. In connection with the recent application of the Electrical Development Company of Ontario for permission to increase its hydraulic development by another 100,000 h.p., the Commissioners have drawn up a memorandum for presentation to the Government in which the granting of further concessions is freely discussed from the standpoint of public policy.

They point out that the franchises already granted to three separate corporations for such a large aggregate development should for the present be sufficient to induce effective competition in the supply of electrical energy. Should an increase in the demand for power call for further development, additional concessions can be granted in ample time to meet it. As regards the development and sale of power by the Province, the Commissioner's advice is that any decision in this matter be deferred until it is seen whether the methods of the companies now operating will prove satisfactory, both in respect to efficiency of service and price. From a financial point of view they urge that it would be a mistake to grant any further concessions for the present. If the demand for electrical power increases, as it undoubtedly will, the value of franchises for the use of Niagara River water will rapidly appreciate, and better terms will be secured for any additional concessions that may be hereafter granted.

The hydraulic development already provided for in Queen Victoria Park amounts to 527,500 h.p., including the new privileges granted by the late Government to the Electrical Development Company. Just what the Falls are capable of yielding in the way of electrical energy it is difficult to say. Estimates run all the way from three to seven million horse power. Assuming, however, that the smaller of these is the more nearly correct, it will be seen that the policy laid down by the Park Commissioners is a most conservative one. For this the people of Ontario have reason to be thankful. Until we have learned to appreciate more than we do at present the tremendous possibilities afforded by the Falls of Niagara for the advancement of our

commercial and industrial prosperity, it is important that we should move slowly. Nothing is to be gained by the public at large from the granting of further concessions before we are in a position to absorb the power already under course of development. Neither would it be wise to dispose of additional privileges before we know what those privileges are actually worth. Not that these privileges are now being demanded of our legislators at Toronto; there is no reason to believe that they are. But there *is* reason to believe that they *may be*, and that in the very near future, for the spectacle of a throng of hungry promotors at Albany grabbing for the last drop of water that passes over the Falls on the New York side must sooner or later find some reflection at Toronto, where privileges three times as extensive lie at the disposal of the Legislature. When such a situation does arise it is to be hoped that the petitions for new concessions will be dealt with according to their merits, and that the rights of the people of Ontario will be adequately protected.

THE WOOLLEN INDUSTRY.

THE Canadian woollen industry can be saved only by an immediate measure of relief. Year by year, since the inauguration of the British preference, it is being slowly smothered under immense and increasing importations which aggregated last year nearly $16,000,000. Almost every branch of the industry is depressed, the cloth mills particularly being in a deplorable state.

The disadvantages under which the Canadian mills operate as compared with their competitors in Great Britain are well known —cheaper labor, capital, machinery, specialization due to an immense market, and all the other points of advantage attaching to long-established and specialized industries, are among the handicaps which have faced Canadian enterprise and which now have almost forced its surrender. We shall not dwell further upon the causes; it is rather the conditions which must concern us.

What are the conditions? Briefly—one-half of the largest and best Canadian cloth mills are now closed. With two or three exceptions the remainder are running on short time, and far from paying any dividend, are actually losing money. They have reached a stage where the banks refuse to advance any further assistance, and unless something is done at once, an additional number of them must soon be closed down.

It is difficult to estimate the loss to Canada of so important an industry. The capital loss is in itself very great. One of the mills recently closed represented an actual investment of $250,000, yet it was sold for $20,000. The closing of some mills and the depression that exists in others has cast a gloom over many a town where the industry was a mainstay, and already a large number of the best skilled workmen have left Canadian mills for a more permanent and profitable field of employment on the other side of the line.

Nor are these the only classes affected. The depression in the woollen industry is largely responsible for the falling off in the number of sheep in Canada. With the decline of their best market the result is not unexpected.

Canadians are loyal to the Empire, but can any defence be advanced, either from a Canadian or an Imperial standpoint, for crushing out an important industry in the great British Dominion? We are quite certain it is not the intention of the Canadian Government to permit such conditions to continue, and quite convinced also that Great Britain does not expect such sacrifices. Canadians in every part of the Dominion are hoping to see relief granted without delay.

THE IMPORTANCE OF CANADA'S WESTERN MARKETS.

Under the heading "Markets of Western Canada" in 1905, INDUSTRIAL CANADA, figures were given to the manufacturers of Canada of th

Arthur. It was shown from the customs returns that for the year ending June, 1904, the imports entered at the various ports entry west of Port Arthur were valued at more than $32,000,(It was estimated that the Canadian manufacturers supplied least twice as much as was imported, and that the total valu manufactured goods sold in that district was about $100,000,

This article attracted considerable attention, and the lis enumerated articles, together with values entered at Winnipeg Calgary, was a surprise to many. This list was not complete, enquiries have been made regarding some articles that were mentioned. The additional articles given below (that may b taken as a supplementary list) are of interest. All figures are the value of imports entered at the ports as named for the twelve months ending June 30th, 1904.

Articles.	Winnipeg.	Calgary.
Baking powder	$12,355	$ 1,22
Books, periodicals and other printed matter.	94,899	8,24
Brooms and brushes	19,048	31
Cordage	8,310	1,09
Gold, silver and manufactures of	11,321	1,44
Jellies, jams and preserves	16,503	
Jewelry	29,659	87
Musical instruments	10,510	2,1
Meats	58,834	38,8
Soap	21,528	6
Candy and confectionery	19,023	
Umbrellas	6,507	

It is also interesting to notice the value and the class of g that are imported at the two largest ports of entry west o Rockies, namely, Vancouver and Victoria. The imports at Va couver amounted to $5,780,114; at Victoria, $2,931,578. The li given herewith will give Canadian manufacturers some idea of t extent of the very important market that is still open to them the Pacific coast. Vancouver particularly, is becoming a larg distributing centre. It is so situated that it must of necessit become the storehouse for a large part of the Western Province This being the case, eastern manufacturers will have to do mor than send their travelling representative to make periodical cal on its merchants. A number of manufacturers have found that has paid them to open branch offices or appoint resident agent and within the next few years a much larger number of eastern manufacturers will have resident representatives on the western seaboard.

	Vancouver.	Victori
Ale, beer and porter	$ 27,812	$ 31,63
Baking powder	25,853	16,4
Books and periodicals	35,062	23,5
Grain, flour and meal	53,839	107,2
Brooms and brushes	8,948	3,6
Carriages—all kinds	24,938	13,1
Cash registers	10,054	....
Cement	61,856	11,6
Cordage	10,482	4,05
Cottons	76,423	71,
Drugs, dyes and chemicals	89,741	254,5
Electric apparatus	156,181	19,5
Furniture	26,312	8,9
Gloves and mitts	22,757	10,51
Gunpowder	74,317	16,39
Gutta percha goods	28,993	28,99
Hats and caps	39,288	27,00
Iron and steel and manufrs. of	838,736	263,26
Iron and steel (free)	129,569	35,86
Jellies and jams	15,172	9,54
Leather and manufrs. of	42,751	25,34
Oils—all kinds	42,045	22,43
Oiled cloths	28,000	8,13
Paper and manufrs. of	43,122	45,58
Pickles	16,886	6,2
Meats	143,404	114,0
Sauces and catsups	23,613	10,
Soap	28,522	
Sugars and syrups	743,812	5,
Candy and confectionery	14,432	8
[illegible]frs. of wood	38,327	
[illegible]ool	87,596	

Executive Council

APRIL MEETING.

A Month of Unusual Activity—Enforcing the Pure Food Law—A Conference to Discuss Demurrage—Aid for the Montreal Technical Institute—Preference via Canadian Ports—47 New Members.

The regular monthly meeting of the Executive Council, Canadian Manufacturers' Association, was held in the Council Chamber, Board of Trade Building, on Thursday, April 20th, 1905, at 2 p.m.

The Chair was occupied by the President, Mr. W. K. George, and the following other members of the Council were present:—Messrs. John Bertram, Dundas; Geo. Booth, Toronto; P. H. Burton, Toronto; Robt. Crean, Toronto; John Dick, Toronto; Richard A. Donald, Toronto; L. V. Dusseau, Toronto; H. W. Fleury, Aurora; Geo. D. Forbes, Hespeler; Jas. Goldie, Guelph; W. P. Gundy, Toronto; E. G. Henderson, Windsor; Jas. Maxwell, St. Mary's; D. T. McIntosh, Toronto; R. McLaughlin, Oshawa; W. K. McNaught, Toronto; J. P. Murray, Toronto; Carl Riordan, Merritton; A. S. Rogers, Toronto; J. D. Rolland, Montreal; A. W. Thomas, Toronto; W. B. Tindall, Toronto; S. M. Wickett, Toronto.

The minutes of the previous meeting as published in the last number of INDUSTRIAL CANADA were approved.

Communications were received as follows:—

(a) From the following members of the Executive Council unable to be present:—Messrs. C. C. Ballantyne, Montreal; Geo. E. Amyot, Quebec; J. J. McGill, Montreal; J. O. Thorn, Toronto; J. M. Taylor, Guelph; Jas. Pender, St. John, N.B.; Arthur W. White, London.

(b) From the National Metal Trades Association expressing appreciation at the presence of the Association representatives at their annual convention.

(c) From the National Association of Manufacturers of the United States inviting representation at their 10th annual convention, to be held in Atlanta, Georgia, on the 16th, 17th and 18th of May. The Secretary reported that it would be extremely difficult for the Association to be represented at this convention by any members of the office staff, and it was, therefore, agreed that a communication should be forwarded, thanking the National Association and expressing regrets at being unable to be represented.

(d) From the Secretary of the Toronto Branch upon the subject of a Branch extension, requesting that the Executive Council allow this matter to stand over until the next meeting for the further consideration of the Toronto Branch Executive.

Reports of the Officers and Committees were received as follows, and upon motion were regularly adopted.

Secretary.

The Secretary reported that sixteen meetings had been held at the Head Office during the month. He had spent two days with the members in St. John, N.B., and had attended meetings of the Nova Scotia and Montreal Branches on April 10th and 13th respectively. A number of the sections of the Association had met during the month, and the woollen manufacturers, although greatly discouraged by the present conditions, were arranging to present their case again to the Dominion Government.

The Tariff Committee and the special committee on Technical Education were expected to meet in the near future.

Treasurer.

G. Booth presented the Treasurer's monthly statement,

Finance Committee.

The report of the Finance Committee was presented by Mr. W. B. Tindall. It provided for the regular monthly expenditure of the Association, and suggested that the Railway and Transportation Committee should consider ways and means for providing a revenue from the work accomplished through the Transportation Department.

It also recommended the re-engagement of Mr. G. M. Murray till July 31st, 1906, at an increased salary.

Industrial Canada.

The report of the INDUSTRIAL CANADA Committee was presented by the Chairman, Mr. A. W. Thomas. It stated that preparations were being made for a special issue of the paper for the month of June, to be issued in connection with the British excursion, and circulated widely through Great Britain. The number would contain brief descriptive articles respecting the various branches of Canadian industry, and its purpose would be to inform the British public of the importance of the manufacturing industries of Canada and the wonderful opportunities for industrial development in the Dominion. Articles for the April issue were approved and for succeeding numbers the following articles received the sanction of the Committee:—

(a) Two articles to be received from the Society of Chemical Industry with regard to the use and care of boilers.

(b) An article on the emigration of Canadians to the United States, by Dr. S. M. Wickett.

The editor had suggested that a Correspondence Column should be opened in the paper, and after a full discussion, the Committee agreed that this suggestion should be adopted subject to the following conditions:—

(a) Letters not to exceed approximately half a column each.

(b) Letters to appear above signature of authors.

(c) Association not to be responsible for views advanced.

(d) Letters to be published at the discretion of the editor.

Railway and Transportation Committee.

The report of the Railway and Transportation Committee was presented by the Vice-Chairman, Mr. W. P. Gundy. This report is published in another column.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by the Secretary. This report referred to the various legislative measures now before the House of Commons which concerned the members of the Association, and also touched upon matters respecting Provincial Legislation.

The Act respecting misrepresentation to induce immigration into Canada introduced into the House of Commons, had, upon consent of the parties interested, been amended so as to apply to misrepresentation both for the purpose of inducing and deterring immigration into Canada. This amendment is in accordance with the views of the Executive Council.

Discussion on the Union Label Bill in the Senate had been postponed until after the Easter adjournment.

At a meeting of the Committee held on April 12th, a number of representatives from the Society of Chemical Industry were present to discuss certain amendments to the Pure Food Law in Canada, and the more efficient enforcement of the same. A resolution was passed appointing a joint committee to take action to [illegible] changes in the following directions:—

so that they may contain specific regulations with regard to the use of preservatives in commercial articles of food.

(b) Definition of a proper label to be placed on all packages of food containing preservatives.

(c) The employment of a sufficient number of district analysts to enforce the Act and make it easy and economical for any person interested to procure official analyses of any substance presented in accordance with the Act, so that the Inland Revenue Laboratory at Ottawa may be a Court of Appeal, and may devote itself to research and the setting of standards.

The attention of the Committee had been given towards having legislation introduced in order to retain the exemption of machinery in the Province of Ontario which had been in force previous to the introduction of the new Assessment Act. Such legislation was rendered necessary only for the present year, as the new Assessment Act will come into force in 1906. A special sub-committee had been appointed to bring the matter to a definite issue, and it was now having the attention of the Ontario Government.

Mr. E. G. Henderson enquired whether the Association had as yet expressed its opinion with regard to the question of the Government control of telephones and telegraphs in Canada. The Secretary explained the cause of the unavoidable delay in this matter.

Mr. A. S. Rogers moved that the Parliamentary Committee should be requested to report on this matter at the next meeting of the Executive Council. This motion was seconded and carried.

Mr. H. W. Fleury suggested that in the meantime the Association should express its appreciation of the action of the Dominion Government in appointing a committee to investigate the question. This was discussed, and finally carried.

Commercial Intelligence Committee.

The report of the Commercial Intelligence Committee was presented by Mr. A. S. Rogers. This report is published in full in another column.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. Crean.

It recommended for acceptance 47 applicants for membership, the names of whom are published in another column.

It referred to the presentation of a formal address of welcome to be presented to His Excellency, the Governor-General, upon the occasion of his forthcoming visit to Toronto, and recommended the following committee, who should represent the Association on that occasion:—Messrs. W. K. George, Toronto; C. C. Ballantyne, Montreal; J. O. Thorn, Toronto; Robt. Crean, Toronto; W. K. McNaught, Toronto; Cyrus A. Birge, Hamilton; J. F. Ellis, Toronto; Edward Gurney, Toronto; and the Secretary.

A special committee had been appointed to carry out the arrangements for the British excursion. The itinerary for the excursionists in Great Britain had been approved, and the appointment of Mr. John A. Cooper as official journalist and Mr. R. V. Shaw as official stenographer were recommended. The excursion plans were being successfully carried out, and 260 passengers had already been booked.

In presenting the report the Chairman suggested that the Executive Council should request the Secretary of the Association to accompany the British excursion party. This suggestion was unanimously approved.

Insurance Committee.

The report of the Insurance Committee was presented by the Chairman, Mr. P. H. Burton. It is published in another column.

Special Convention Arrangements Committee.

The Secretary presented a report of the special committee on Convention Arrangements which had been appointed at the last Annual Meeting. This report contained the following resolution submitted as a result of the deliberations of the committee:—

Resolved, That this committee recommend to the Executive Council of the Association that all of the arrangements for holding and conducting the Annual Convention be under the direction of a special standing committee consisting of the General Officers, the Chairmen of the standing committees and the Chairmen of the Branches of the Association;

That is shall also be the duty of this committee to cause to be nominated candidates for the various offices and standing committees of the Association, and when such nominations have not been received from other sources, it shall then be the duty of this committee to nominate candidates;

And further, that this recommendation be incorporated as a regular by-law of the Association.

This report was adopted on motion of Mr. Richard A. Donald, seconded by Mr. W. K. McNaught.

Branches.

The report from the Montreal Branch was presented by the Hon. J. D. Rolland. This report appears on another page.

In moving its reception, Mr. Rolland suggested that the question of extra-provincial corporation tax should be recommended for discussion at the approaching conference of the Provincial Cabinet Ministers to be held in the City of Quebec. This suggestion was adopted.

The report of the Toronto Branch, presented by Mr. Richard A. Donald, and of the Nova Scotia Branch, presented by the Secretary, appear elsewhere. The resolution presented from the Nova Scotia Branch upon the application of the preferential tariff at Canadian ports only was referred to the Tariff Committee for consideration.

Before the meeting adjourned, Mr. Burton called attention to the need for special legislation with regard to telephone wires. This was referred to the Parliamentary Committee.

RAILWAY AND TRANSPORTATION COMMITTEE.

The regular monthly meeting of the Railway and Transportation Committee was held on the 19th inst. The following is a list of the matters dealt with:—

Canadian Shipments by Subsidized Lines.

A communication was read from the Acting Deputy Minister of Trade and Commerce, acknowledging resolution respecting the reservation of space for Canadian shipments via subsidized lines, and asking for specific instances where Canadian firms have been inconvenienced for the benefit of United States shippers. The Manager of the Transportation Department was instructed to communicate the contents to interested members and report if any further action is deemed advisable.

Interchange Switching.

A satisfactory progress report was made by the Manager of the Transportation Department in connection with interchange arrangements which have been applied for at various points.

Demurrage.

The complaint of this Association respecting demurrage charges by railways, was heard before the Board of Railway Commissioners at a special sitting held at Ottawa on the 23rd inst. The complaint was carefully and fully stated along the lines indicated in previous reports and in INDUSTRIAL CANADA. At the conclusion, the representatives of the railways intimated that they would be prepared to attend a joint conference of representatives of shippers and representatives of railways in order to endeavor to adjust the difficulties by revising the present rules. A report of the proceedings before the Railway Commission will appear in the next issue of INDUSTRIAL CANADA.

Supplement to Classification.

The Manager of the Transportation Department reported an announcement in the Canada Gazette of application by the rail-

ways for approval of a supplement to the classification which involves increases, changes and reductions. Interested members have been advised where necessary, and considerable correspondence has passed with the railway representatives respecting proposed changes. There are some points still in dispute which may have to be formally heard before the Railway Commissioners.

Stove Rates.

Conference between the interested railways and stove manufacturers resulted in a draft agreement for certain commodity rates on stoves. It is expected that another conference will take place shortly, after which the rates agreed upon will be published.

Staking Flat Cars for Lumber.

Lumber manufacturers have brought to the attention of the Department railway requirements respecting the staking of flat cars, more particularly with regard to recent regulations which increased the number of stakes and cross pieces and the size of same, involving considerable expense in the loading of this material. This matter is receiving attention.

Other matters dealt with had reference to the adjustment of difficulties and claims of individual and general interest.

COMMERCIAL INTELLIGENCE COMMITTEE.

A well-attended meeting of the Commercial Intelligence Committee was held on March 22nd.

The committee, with the assistance of the Canadian Associated Press, and the High Commissioner's Office, London, England, are still investigating the unfortunate reports recently circulated regarding Canada's export shipping.

Communications.

The British Vice-Consul at Leeds wrote offering his assistance to Canadian manufacturers who desired to exhibit at the Leeds Exhibition.

The Secretary of the London Chamber of Commerce advised that a large number of British University students intended to tour Canada during the present summer. Your committee recommended that the Reception and Membership Committee give some attention to these students while in Canada.

Communications were presented calling the attention of the committee to the Colonial and Indian Exhibition at the Crystal Palace, London, the Exhibition at Grenoble, France, under the auspices of the Grenoble Chamber of Commerce, and a Colonial Exhibition at Marseilles in 1906. Particulars of all of these will be published in INDUSTRIAL CANADA.

Canadian Trade Index, 1905.

The committee discussed the advisability of issuing another edition of the Canadian Trade Index, and passed the following recommendation:—"That the Association issue another edition of the Canadian Trade Index at as early a date as possible, the financial arrangements to be subject to the approval of the Finance Committee, and the Chairman of the Commercial Intelligence Committee and the Secretary to select a committee of three to supervise the preparation, publication and distribution of the work." In this connection it was decided to forward to the members of the Association preliminary notices advising them of the new edition. The committee named to direct the work is as follows:—Messrs. C. N. Candee (Chairman), T. A. Russell and Wm. Stone.

The Chairman introduced a suggestion that the committee might co-operate more closely with the INDUSTRIAL CANADA Committee in furnishing news for the foreign trade department of the paper. This department is really published in connection with the work of the Commercial Intelligence Committee, and it was decided to recommend to the INDUSTRIAL CANADA Committee to have this fact noted in the paper each month.

Commercial Agency System Approved Of.

The development of the work of the Trade and Commerce Department at Ottawa in connection with the extension and improvement of the commercial agency system was favorably discussed, and it was recommended that a resolution be passed and forwarded to the Department of Trade and Commerce as follows:—

Whereas, The Department of Trade and Commerce of the Dominion Government has increased during the past year the usefulness of its commercial agency service,

(1) By publishing the reports of the commercial agents and the foreign trade enquiries weekly instead of monthly,

(2) By extending the scope of its work and appointing agents to new fields, and

(3) By providing for more frequent visits to Canada by its foreign agents in order that they may be kept familiar with Canada's increasing possibilities in export trade,

Therefore be it resolved, That the Canadian Manufacturers' Association express its appreciation and tender its best thanks to the Honorable, the Minister of Trade and Commerce, for the assistance given to increase Canada's export trade by the development of the commercial agency service as above.

Mr. Kittson Discusses South African Trade.

A special meeting of the committee was held on March 30th for the purpose of meeting Mr. C. M. Kittson, who has been appointed to the position of Canadian Commercial Agent in South Africa. A number of members in addition to those on the committee were invited to be present. Mr. Kittson gave a short address regarding the possibilities in South African markets, and the whole question of South African trade was discussed at some length. A postcard notice was sent to the members in Toronto advising them that Mr. Kittson would be in the city and make the Association office his headquarters. As a result of this a number of enquiries were received from members desiring to see Mr. Kittson, all of whom were called on.

On the following day, March 31st, a luncheon was held for the Hamilton members at the Royal Hotel, Hamilton, at which Mr. Kittson was present. South African trade was the topic for discussion. After the luncheon a large number of Hamilton members were called on.

MONTREAL BRANCH.

Two meetings of the Executive Committee of the Montreal Branch of the Canadian Manufacturers' Association were held during the past month. The first, a special meeting on March 28th, was called to consider the situation with regard to the establishment of a technical school in the city. Mr. J. J. McGill presided, and those present were:—Messrs. Geo. Esplin, D. Williamson, S. W. Ewing and J. H. Birks.

Technical School.

A letter was read from Mr. Alex. McPhee, President of the Montreal Technical Institute, stating that while our wealthy Canadians are willing to contribute to the enterprise, they insist that the industrial concerns which are most directly affected shall show their interest in a tangible manner; that if the Montreal manufacturers would pledge themselves to add (say over a period of two or three years) the sum of $100,000 to the $100,000 now offering from the Mechanics' Institute, there would be little difficulty in securing another $100,000 from interested wealthy Canadians. The members of the Montreal Executive were asked to pledge their support to the undertaking. The Secretary was instructed to write to the committee of the Technical Institute, asking them to supply a statement as to the amount of money required for the building and maintenance of the proposed school, and the kind of instruction that would be given there, and the extent of the work it was intended to carry on.

The regular monthly meeting was held on April 13th, with the Chairman, Mr. J. J. McGill, presiding. There were also present:—Messrs. J. D. Rolland, G. W. Sadler, Robt. Gardner, Geo. Esplin, C. C. Ballantyne, J. H. Burland, D. Lorne McGibbon, S. W. Ewing, C. B. Gordon and Clarence F. Smith.

The Secretary reported that he had issued letters to twenty of the most influential members of the Branch, urging them to interview their aldermen on behalf of the motion of Ald. Ames, to strike off the tax on electric motors. Owing to a technicality the consideration of this motion had been delayed for a couple of weeks, but it is expected that it will carry by a good majority.

Extending the Branch Limits.

The question of extending the limits of the Montreal Branch so as to include the district immediately around the city was considered. A resolution was passed recommending the Executive Council to have a deputation, consisting of two or three members of the Montreal Executive and the General Secretary of the Association, go out to Sherbrooke to look over the ground, with a view to establishing a new branch there, or of adding the members of that district to the Montreal Branch.

The more effective handling of the Montreal membership was considered, and on the request of the Secretary, a local Membership Committee will be formed, to deal with the matter.

A satisfactory report of the work done by the Insurance Department during the past month was presented by Mr. E. P. Heaton, and was favorably received.

Extra-Provincial Legislation.

The extra-provincial license system was considered at length. Hon. J. D. Rolland remarked that an Act had just been passed by the Quebec Legislature, imposing a tax upon any firm doing business in the Province whose principal place of business happened to be in another portion of the Dominion. A provisionary clause was attached to this Act stating that as soon as the Province of Ontario drops its license system, Quebec will do the same. A resolution was passed asking the Parliamentary Committee to take the matter up with a view to abolishing the system.

Twelve application for membership were passed.

TORONTO BRANCH.

The regular monthly meeting of the Executive of the Toronto Branch was held on April 13th. Mr. Richard A. Donald, Chairman, presided. Other members present were:—Messrs. W. P. Gundy, S. R. Hart, C. B. Lowndes, Jas. P. Murray, Robt. Crean, Thos. Roden.

A letter was presented from the City Engineer briefly stating what had been done to make effective the provisions of the $700,000 fire protection by-law. This letter was forwarded to the Insurance Committee with the request that an effort be made to have the city complete this work during the present summer.

The General Secretary of the Association asked for an expression of opinion regarding the extension of the Branch to near-by towns. It was decided, as there was a very important principle involved, that the same should not be finally dealt with until the May meeting.

The Chairman reported that the resolution of the Branch respecting pawnbrokers had been presented to the Provincial Premier and consideration promised.

Representatives of the Branch on the Toronto Civic League reported on the work undertaken by that organization. Mr. R. S. Gourlay, who had been acting as one of the representatives of the Branch, found it necessary to resign, and Mr. S. Harris was appointed in his place.

Sixteen applications for membership were approved of. The names of these appear in another column.

The Chairman reported the action taken to secure exemption of machinery from taxes during the present year, and informed the Executive that the Parliamentary Committee were at present dealing with the matter and a sub-committee has been appointed to present the case to the Provincial Secretary.

The Branch recommended to the Reception and Membership Committee the advisability of stating in as definite terms as possible the requirements necessary in order to qualify for membership in the Association.

NOVA SCOTIA BRANCH.

A meeting of the Nova Scotia Branch was held on Monday, April 10th, the Chairman, Mr. Alfred Dickie, presiding.

A number of important questions received consideration. It was decided to recommend that the Branch should express itself in favor of Government control of the telegraph system in Canada. A similar recommendation with regard to the telephone service was held over.

The following resolution introduced by Mr. W. J. Clayton was unanimously carried, and directed to be forwarded to the Executive Council of the Association for consideration:—

"That this Association express its conviction that the interests of the Canadian people can best be served and a strong national sentiment be fostered by keeping the trade of the country, as far as possible, in Canadian channels; and whereas, a large portion of the goods imported into Canada now enter via foreign ports and are carried over foreign railway lines, therefore, co-operation is asked from the Canadian Manufacturers' Association, the various boards of trade, and other representative bodies, in pressing upon the Dominion Government the desirability of so framing the tariff that there shall be a customs preference on all goods which enter Canada direct from the country of their origin; also, on all goods entered at Canadian ports when carried in British shipping."

AND STILL IT GROWS.

47 New Members added to the List in April.

Bloomfield, Ont.

Bloomfield Packing Co., Ltd., Canned Fruits and Vegetables.

Brantford, Ont.

Waterous Engine Works Co., Ltd. (Alfred J. Wilkes, 3rd Member).

Brockville, Ont.

Dobbie, A. G. & Co., Carriage Hardware and Gears.
Hall, The James, Co., Gloves, Mitts and Suspenders.
Smart, R. H., Dairy Supplies, etc.

Buckingham, Que.

Capelton Chemical Co., Commercial Fertilizers.

Farnham, Que.

Canada Wood Mfg. Co., Ltd. (James R. Roaf, 2nd Member).

Glenora, Ont.

Wilson, J. C. & Co., Power Machinery, Turbine Water Wheels, etc., etc.

Goderich, Ont.

Lake Huron & Manitoba Milling Co., Ltd. (R. S. Williams, 2nd Member).

Hamilton, Ont.

Canadian Drawn Steel Co., Ltd., The, Cold Drawn Steel.
Hamilton Steel & Iron Co., Ltd., The (J. Irvine Hobson, 2nd Member).
Tinling, Charles.

Lindsay, Ont.

Horn Bros. Woollen Mills Co., Tweed and Blankets.

Montreal, Que.

Aird & Son, Boots and Shoes.
Canada Car Co. (N. S. Reeder, Jr., 2nd Member).
Canadian Buffalo Forge Co., Fans, Blowers, Forges, Coils.
Dawson, William V., Stationery.
Grip, Limited (S. W. Tilden, 2nd Member).
Hutchison, C. A., & Co., Fancy Wrought Iron Work, Fire Proof Doors, Fire Escapes.
Kennedy Cap Co., The, Caps.

McLeod, Hawthorne & Co., Trunks, Suit Cases, Valises, Bags, Blacksmiths' Bellows, Portable Forges.
Northern Electric & Mfg. Co., The, Electrical Apparatus.
Otis-Fensom Elevator Co., Ltd. (B. F. Peacock, 2nd Member).
Pringle, The R. E. T. Co., Ltd., Electrical Apparatus and Supplies.
Smith, Carter & Smith, Ltd., Shade Cloth.
Standard Paint & Varnish Works (Ludger Gravel, 2nd Member).

Ottawa, Ont.

International Portland Cement Co., Ltd., Portland Cement.

Port Arthur, Ont.

Pigeon River Lumber Co. (J. J. Carrick, 2nd Member).

Sarnia, Ont.

Canada Machinery Co., Ltd., Iron Working Machinery.

Sydney, N.S.

Dominion Tar & Chemical Co., Ltd., Coal Tar Products.

Toronto, Ont.

Canada Cycle & Motor Co., Ltd., The (R. Junkin, 2nd Member).
Canadian American Music Co., Ltd., The, Music Publishers, Printers and Binders.
Canadian Heating & Ventilating Co., Ltd. (Norman A. Wyllie, 2nd Member).
Canadian Time Recording Co., Ltd., The, Time Recorders, Watchman's Time Detectors.
Canadian Underskirt Co., Ltd., Underskirts.
Davies, William, Co., Ltd. (W. H. D. Miller, 2nd Member).
Dick, John, Limited (Alexander Alexander, 2nd Member).
Dominion Roller Screen Co., Ltd., Roller Window Screens.
Hunter, Rose Co., Ltd., The, Printers and Bookbinders.
McGuire, W. J., & Co., Fire Extinguishing Apparatus.
Mack, C. W., Rubber Stamps, Seals, Stencils and Steel Stamps.
Massey-Harris Co., Ltd. (Jos. N. Shenstone, 5th Member).
Merchants Dyeing & Finishing Co., Ltd. (Casey A. Wood, 3rd Member).
Pease Foundry Co., Ltd. (R. Home Smith, 3rd Member).
Superior Mfg. Co., The, Steel, Brass and Rubber Stamps.

Windsor, N.S.

Windsor Furniture Co., Ltd., Furniture.

Woodstock, Ont.

Richards Pure Soap Co., Ltd., Laundry and Toilet Soaps.

NATIONAL METAL TRADES CONVENTION.

The National Metal Trades Association was called into existance to defend its members against the unreasonable demands of trades unions, and after seven years of activity and growth its officers were able to report to the Convention held in Chicago on March 23rd and 24th, 1905, a year full of magnificent results.

At the convention about 50 per cent. of the 330 members of the Association were present. Considering that they are scattered in twenty different States of the Union, with several in Canada, this was remarkable. The convention proceedings were opened by an address of welcome from Dr. H. S. Taylor, representing the City of Chicago, who concisely stated the object of the Association by saying "You are here to uphold each other and to prevent others from holding you up."

The Association has had during the past year a substantial increase in membership; its finances were reported in a satisfactory condition and the work accomplished was described as the most important in the history of the Association.

The important topic for consideration was a report of the Plan and Scope Committee, which dealt with the relationship existing between the National and Local Associations. This report recommended the formation of branch associations, membership in which would mean also membership in the National Association. It was generally felt that the effect of this recommendation would be to greatly increase the membership of the Association.

In this brief account of the convention it is impossible to give more than an outline of the record of success that has attended the Association's efforts. A few principles and observations given voice to by the President, Mr. H. N. Covell, Brooklyn, and Commissioner E. P. Eagan, Cincinnati, cannot be read too often.

Mr. Covell in his address said:—

"The statement has been made that the purpose of this Association is to destroy labor unions. This I positively deny, and it seems almost ridiculous to have to so state. I think any fair-minded man will admit that the employee has the same right to organize that the employer has. Labor unions are not wholly bad by any means, and among the ranks of labor leaders are many men actuated by honest endeavors to better the conditions of the wage-earner. It is only when they step beyond their sphere, and endeavor to force conditions which are economically wrong, and to use their power to prevent the employer from exercising his constitutional and God-given rights in saying whom he shall employ and in what manner, that this Association steps in."

Mr. Commissioner Eagan gave a record of all the different labor disputes and decisions of the Court which affected members of the Association. His address should be read in full. All that is published here is a few paragraphs summing up the present situations, and giving some of the lessons learned from experience. Some of Mr. Eagan's observations were:—

"The past year has witnessed a pronounced change in public sentiment in the matter of rampant trade unionism. From an attitude of supine tolerance of anything and everything, lawful and unlawful, done in the name and on behalf of trade unionism, the public has in a measure been awakened to a realization that the methods employed by the leading trade unions of to-day cannot longer be tolerated if the industrial supremacy of this country is to be maintained. This sentiment has crystallized on the open shop issue, using that term in its broader sense as signifying the entire absence of unwarranted interference and restriction.

"Trade unionism follows general business conditions; can prosper and develop only when employment is plenty and wages are good. A time of depression such as we have just passed, with its consequent scarcity of employment, invariably means depletion of the treasury and restricted opportunity for the carrying on of the mistaken plans of the leaders of trade unionism.

"The unions of metal working mechanics are to-day more thoroughly committed to the policy of lawlessness and the promotion and defence of flagrant violence than ever before. With the return of prosperity and with improved business conditions, we shall see renewed activity on the part of these unions, and it behooves us to have our organization in such shape that we can successfully cope with any situation that may arise.

"We have determined that only as a last resort will bonuses be paid to workmen for working in struck shops. Our experience has been that the payment of a stated sum per day as a bonus, over and above the regular wage, did not accomplish the result desired, in that it did not replace strikers with permanent workmen.

"During the past year we have emphasized the lesson heretofore learned, that standing back to back on a platform of absolute fairness, no attack by any trade organization or combination of such organizations can force us to give up the vital principles for which we contend. So long as the National Metal Trades Association stands for justice and fairness to all men, each within his rights as clearly defined by the laws of the land, and so long as its membership displays the loyalty that has been so evident in the past, nothing can prevent its continued success."

THE CHEMICAL INDUSTRIES OF THE DOMINION, 1905.

BY

W. R. LANG, D.Sc., F.I.C., F.C.S.
Professor of Chemistry in the University of Toronto.

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*(Continued from last month.)**

X.—The Cement and Plaster Industry.

The manufacture of Portland cement is mainly confined to Ontario, though one establishment—the Crescent Cement Works—is situated at Longue Pointe, in the Province of Quebec. In Ontario there are some 14 companies and eight factories in operation, and throughout this Province are found the necessary raw materials (clay and marl) of an excellent quality. The development of the industry has been rapid, and has all taken place within the past few years. The most improved method of procedure is as follows: the marl is thoroughly mixed, mechanically, with water into a thin paste, and the same operation is performed with the clay. The two fluids are mixed thoroughly in the required proportions, and in a pasty condition are pumped into steel rotary calciners, about 70 feet in length and 6 feet in diameter, set at a slight angle to the horizontal. These rotary calciners are the great feature of the Canadian cement plants. This form of kiln is originally of English origin, but has only been brought to its present effective condition since its introduction to this country. In the interior of the kiln are "channel-irons" running from end to end. At the lower end fuel is introduced in a particular manner, and the burning gases pass through the entire length of the kiln, and are allowed to escape at the upper extremity. At this latter end is introduced the "slurry" of the mixed ingredients, which becomes dried and finally calcined in the slow passage from one end to the other. The revolving irons carry the "slurry" up with them as they rise, and on reaching the top it falls, under the action of gravity, through the burning gases, being subjected at the hottest part to a temperature of 3,000° F., when combination takes place between the constituents of the fused mass, and the resulting "clinker" emerges into the vessel destined for its reception. The drying and calcining is thus performed in one operation, and no preliminary pressing of the material into bricks is required.[50] At the works of the National Portland Cement Co., recently erected at Durham, Ont., a great saving of time is effected by cooling the clinker in vessels drawn by an endless chain through a stream of water below the ground level. After cooling in this manner it is ground to a fine powder, and packed in bags or barrels ready for use. The whole operation by this process occupies only eight hours, a period of time which will be appreciated by all acquainted with the older methods. At Durham the raw materials are brought from the natural deposits, which are close at hand, calcined, cooled, ground, and packed by means of a continuous series of mechanical conveyers from one part of the establishment to the other. This company has another plant in course of erection at Hull, P.Q., on the Ottawa River, which is intended to supply the Eastern Canadian market.

Several articles have appeared lately in the public press[51] pointing out that a possible over-production of cement may be the result of the numerous large concerns which are already in operation or are about to be started. Whether or not this will take place in the immediate future depends, naturally, on the general prosperity of the country and the consequent demand for building materials. Certainly cement has gained considerable reputation as a substitute for stone, as can be seen by the extent to which it is made use of by architects. It can be readily moulded into any form and may then be dressed to represent the natural article. If it can ever oust stone or brick from their present position depends, not only on its comparative cost, but on the quality of cement put out by manufacturers. One case of a collapse due to an admixture of a single bag of inferior material and the whole fabric of the cement industry, as supplying a substitute for the older building materials, will be in a danger of a similar fate. The total output of Portland cement in 1902 was valued at 1,028,618 dols.,[52] and in 1903 at 1,166,497 dols.[52] *bis.*

Gypsum is found in considerable quantities in Nova Scotia and New Brunswick. At Windsor, N.S., there are immense deposits; the beds found in the vicinity of Hillsborough, N.B., are, however, very large and of great purity, and form the basis of the most extensive operations.[53] It is also found in Ontario, and plaster works are located at Paris in that Province. In 1901 active operations were begun at Gypsumville, Manitoba. The industry, however is principally located in New Brunswick. Drawbacks in the way of freight charges, inadequate shipping facilities, and the competition offered by manufacturers of plaster of Paris in the United States, kept the industry from developing until the Intercolonial Railway was opened and the increased duty on American plaster imposed, when the New Brunswick plaster, quarried and prepared at Hillsborough, came to be firmly established on the Canadian market. In manufacturing plaster of Paris, the stone is first dried in the air and ground—not burned in lumps as is still done to a considerable extent in England and on the Continent of Europe—and the pulverized material subjected to a process of calcination in kettles, of a capacity of 60 barrels of 300 lb. of the calcined plaster, furnished with lids and stirring arms which keep the material in constant motion. When the required temperature has been reached (285° F.), the plaster is removed and packed in paper-lined barrels for market. Analysis of the Hillsborough gypsum shows it to be 99.88 per cent. $Ca\,SO)_4$. The principal markets for plaster of Paris are Canada, the United States, and South Africa, while the crude gypsum is exported largely to New York and other portions of the States, being used for making plaster for walls and ceilings.[55] According to the Geological Survey Reports for 1902, the gypsum produced in Canada during that year amounted to over 332,000 tons, valued at 356,317 dols.

XI.—Carbohydrates: (*a*) The Refining of Sugar; (*b*) The Beet-Sugar Industry.

Refining of Raw Sugar.

The hoped for developments in the production of sugar from beets in Ontario and Southern Alberta, referred to in the first edition of this paper (1903) have not come up to the expectations either of the writer or of the public as will be seen from the sequel. Statistics show that during the last decade cane sugar has increased in production about 200 per cent. Judging from present appearances, and allowing for some

(50) The Portland Cement Industry: "Queen's Quarterly," Jan. 1903.

(51) "*The Globe*," Toronto, March, 1903, and other papers.

(52) Geological Survey of Canada: Mineral Products, 1902.

(52 *bis*) Statistical Year Book, 1903.

(53) Geological Survey of Canada: The Mineral Resources of New Brunswick, 1899.

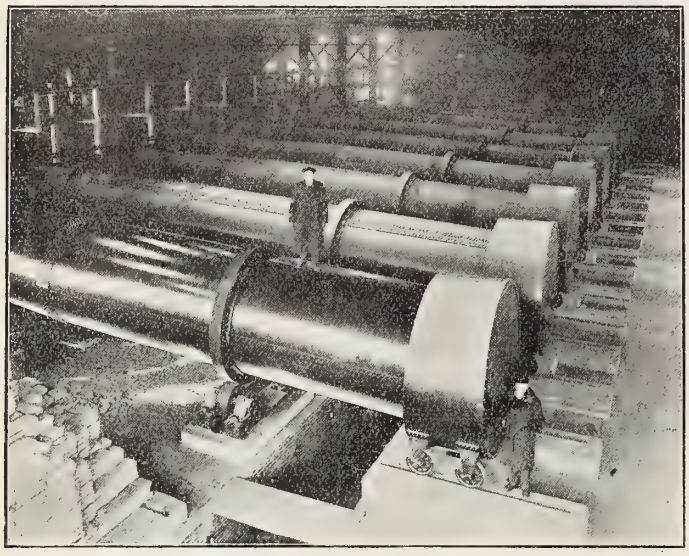
(54) Analysis by A. A. Breneman, of New York, in Mineral Resources of New Brunswick, Geological Survey of Canada, 1899.

(55) Letter from the Manager, Albert Manufacturing Co.

*Our attention has been called to two slight inaccuracies in last month's instalment, which, with the author's consent, we desire to correct. The output of corundum in 1904 is stated to have been over "three million dollars"; this should have read "three million pounds." In referring to the Shawinigan Carbide Co., the word "prospective" should have been deleted, as this company has been in operation for some months past.—EDITOR.

slight tariff alterations, the increase in Canada should soon be in proportion to that of other countries.[56]

Raw sugar is imported from Cuba, the West Indies, Java, Manila, the Brazils, Mauritius, and the Continent of Europe.



A Battery of 8 Rotary Kilns.

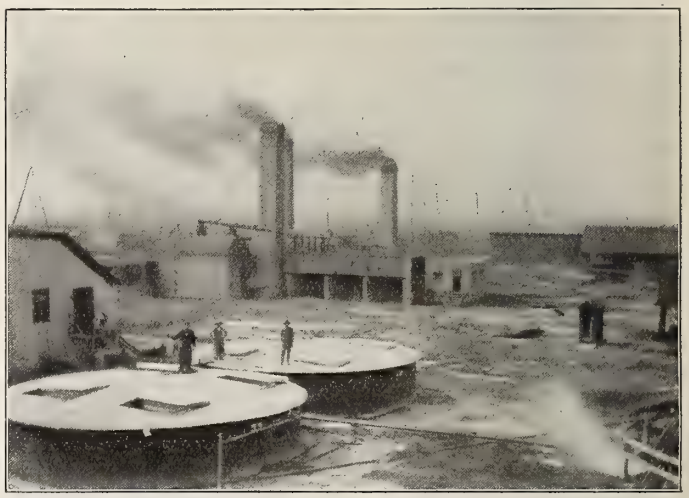
The most improved machinery and processes are employed, refined sugars and syrups being the staple products.

Belgium supplies to Canada the largest proportion of sugar, the imports from that country amounting in 1901 to 127,931,553 lb.; from Germany in the same year 83,941,290 lb. entered the country, the total imports being 336,694,833 lb., valued at close on 8,000,000 dols.[57]

Beet Sugar.

The most interesting point connected with the sugar industry is the way in which the production of sugar from beets cultivated on Canadian soil has become, in the past few years, an important factor in the country's progress. As far back as 1872 the Dominion Government sent a special agent to Europe to make a study of the industry. A bounty of 25,000 dols., afterwards increased to 70,000 dols., was offered by the Quebec Government in 1875 to the first successful factory to be established in a situation approved by the Government. This led to the establishment of a company, known as the Union Sucrière du Canada, which, in 1881, erected the first of four proposed factories at Berthierville, Que.[58] This establishment was unsuccessful and only operated for a few days, mainly owing to the failure of the beet crop. After passing into other hands the plant was bought by an American company and removed to Eddy, New Mexico,[59] Another company was, in the same year, organized at Farnham, P.Q., not far from Montreal which, after some vicissitudes, did not deem its success sufficient to warrant a continuation of its operations, so sold its plant to a company at Rome, N.Y., in 1897. A third company, known as the Pioneer Beet Co., started operations in 1881, at Coaticook, P.Q.,[59] and was successful in part, receiving a subsidy of 35,000 dols. from the Government, but it, too, closed its doors in 1883. The causes to which these failures may be attributed were lack of capital and enterprise, and the indisposition of the farmers to cultivate beets. The Agricultural Department of the Provincial Governments, however, continued experimenting with various kinds of beets and studied the conditions most favorable to their successful growth. For some years past the Ontario Agricultural College at Guelph has, as a consequence of the excellent results obtained at their experimental stations, been carrying on an educational campaign among the farmers of the Province. As a result of this the quality and tonnage of beets now grown in different parts of Ontario surpass those of many American States. The climate of this Province, with its sunshine and long autumns, is peculiarly favorable to the cultivation of the beet, which takes about four months and a half to reach maturity. It requires, however, to be demonstrated to the farmers that the cultivation of beets will pay them better than other land produce before the requisite supply of suitable material will be obtained. That profits are large can be gathered from the fact that wheat yields in Ontario 15 dols. an acre per annum, oats, 9.74 dols., and beets for sugar, 60 dols. In the last case the cost of production is necessarily large, owing to a great amount of labour being required, but, all the same, the profits to the farmer should, with skilful treatment, be at least 30 dols. per acre per annum. The beet tops are of value as a fertilizing agent owing to the salts they contain, and find a use also as a food for cattle. In 1901 beets were grown—under instructions from the Agricultural Department—in 15 districts of Ontario, and the average yield per acre was over 17 tons of a high quality of beets which gave an average of 15.6 per cent. of sugar of an average purity of 87.7 per cent. All this points to a future for Ontario as a sugar-producing country; this fact has been fully realized by the Provincial Government, which offered a bounty of 275,000 dols. for three years,[60] and at its recent session extended this bounty for a further period of two years, to be distributed among factories according to the amount produced. Four companies were organized a few years ago, namely, the Wiarton Beet Sugar Company (capital 500,000 dols.) which has since been shut down; the Dresden Sugar Company (capital 600,000 dols.) which has now removed its factory to Michigan; the Wallaceburg Sugar Co. (capital 500,000 dols.) and the Ontario Sugar Company, of Berlin (capital one million dollars): each of these companies received a bonus from the town where it was situated, averaging 28,000 dols. The capitalization of a company engaged in this industry depends entirely on the size of the plant, a general estimate of 1,000 dols. per ton of beets per day may be considered a fair calculation of what would be required.

Two companies only are thus in the field this year, and it seems reasonable to expect that both factories will increase their output over that of 1903. The nearness, geographically speaking, of the Wallaceburg and Dresden concerns to one another—some



In the Refining Yard, Petrolea.

nine miles apart only—militated against their success and it is to be hoped than now the former is, so to speak, alone it will do better than heretofore..

Beet sugar factories have also been established in Alberta, in

(56) Letter from Mr. D. A. Gordon, President of the Wallaceburg Sugar Company.

(57) Essay, Mr. Read, University of Toronto.

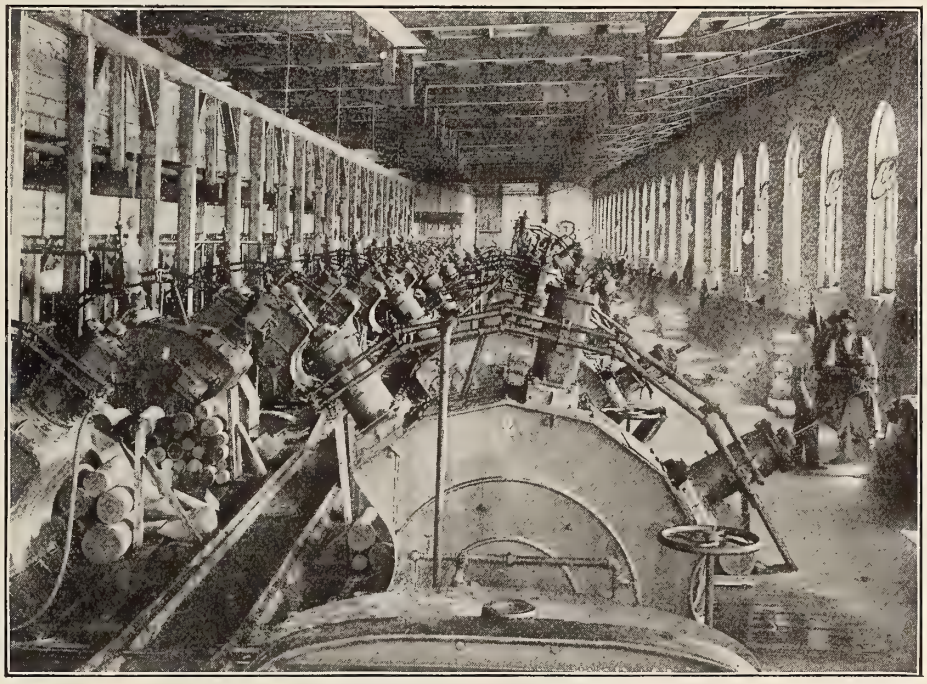
(58) Report of Dominion Government on beet sugar manufacture in Canada.

(59) Letter from the Manager of the Dresden Sugar Co., Ontario, now removed to Michigan.

(60) 1, Edw. VII, Cap. II, (1901.)

the North-West Territories of Canada. Since 1893, an area of about 300,000 acres has been made productive by means of the irrigation system of the Canadian North-West Irrigation Co., and a portion of this area has been utilized for beet cultivation, principally by the Mormon settlers. The most important factory has been established by the Knight Sugar Company at Raymond, south of Lethbridge, on the Canadian Pacific Railway. The capital of this company is 1,000,000 dols. The area intended to be planted with beets is 3,000 acres, and the daily capacity of the factory will be 400 tons of beets per day. The only difficulty which the industry is encountering in the North-West is the scarcity of labour.[61] This is due partly to the scanty settlement of the country, and partly to the superior attractions of the mining regions, which are situated at no great distance.

A plentiful water supply, lime, and source of power, are necessary for the profitable prosecution of the industry; all this has been carefully considered in locating the factories enumerated above, steam power being employed for pumping and the working of all machinery. There is room for many more factories in the Dominion; according to Dr. A. B. Shuttleworth, Chief Agriculturist to the Ontario Sugar Co., whose name is indissolubly connected with the development of beet cultivation, it would require over 30 refineries each of 600 tons capacity to supply the home market alone.[62]



The Grinders in a Pulp Mill.

The working season of a factory runs for about 100 days, operating continuously. The cost of the sugar is from 3 to 3½ cents per lb. and the profits to the makers are estimated at 50 cents per ton of beets used. This would mean that in a factory of 500 tons capacity, working for 100 days, the profits would amount to 25,000 dols.

The scope of this article does not allow of any detailed consideration of the working process by which the sugar is extracted from the sliced beets and crystallized. New processes are being employed for utilizing the residual molasses. This is treated for the recovery of the sugar in some part, and also for the production of alcohol by fermentation. An American company in 1901 produced 915,000 galls. of alcohol in this way, of a quality considered to be quite equal to the grain product. Another new process is that of the manufacture of syrup from the beet instead of sugar; 40 galls. of this can be obtained from a ton of beet, which, at 30 cents a gallon, means a return of 12 dols. per ton of material used, while the product in sugar yields only from 7 to 8 dols. per ton of beets. The beet-pulp refuse is also being largely used as a food for live stock, for which purpose it is extremely suitable owing to its nitrogen contents. In this connection a new process has been introduced for drying the pulp, which entails an expenditure of 5 dols. per ton, but, as the dried pulp is sold at 6.25 dols per ton, a clear profit of 1¼ dols. is thus secured to the manufacturer.[63]

(61) Letter from Manager of works at Raymond.

(62) Berlin News Record, Nov. 8, 1902.

(63) In the above I have drawn largely from an essay on the beet-sugar industry by Mr. E. R. Read, a student in the Department of Political Science, University of Toronto, who kindly placed his papers at my disposal. Also from Dr. Shuttleworth's article in the "Berlin News Record,' 1902.

The production of sugar from Canadian grown beets is a new and, it is to be hoped, rising industry which offers great scope for some co-operative arrangements between the companies and the farmers. It should give an impetus to agriculture, afford employment to thousands of unskilled workpeople, and, as an important industry, be a lasting benefit to the country. Whether or not the growing of beets will become popular remains to be seen; the present quality is as yet not as good as was expected, but much may yet be done in the way of improvement by careful cultivation.

The following communication, dated March 6, 1903, from Mr. George Elsey, manager of the Dresden Sugar Co., conveys some idea of the position of the industry from the point of view of the manufacturer and its possible future:—

"At the present time there were four factories which operated this last season, and from what we are able to learn the results were as satisfactory as could be expected under the existing conditions, that is, the rain fall last summer damaged the beet crop from 50 to 60 per cent., both in the United States and in Canada. The balance of the crop, on account of wet weather, cost considerably more to raise than what was necessary. It was unfortunate that this should occur in the first season that the factories were started in Canada as it was very disappointing, but most of the farmers have told us that they were surprised at the amount of rain the beet would stand, and in several instances where they could harvest the beet crop, the corn and other crops were ruined. After we have had a seasonable year and it will be demostratted to the farmers that there is more money in raising sugar beets than any other crop that grows, the four factories now in existence will get their supply of beets within hauling distance of the factories. . . . . Our farmers know well that the Michigan farmers obtain about a dollar a ton more for their beets than they do, and they also understand that it has cost as much in money and labor to raise a ton of beets in Canada as it does in Michigan or any part of the United States. They therefore feel dissatisfied, and are clamouring for more money, which the companies would be glad to pay if they could sell their sugar for the same price as the American Beet Sugar refineries. The difference between the two markets to-day is 1.10 a 100. The present Canadian sugar tariff is such that it would not allow any more sugar refineries to be built in Canada. The companies that are already here have the experience of what this tariff can do. It allows sugar that has been refined in the United States to be shipped in here and undersell Canadian refined sugar, which means a loss to the refineries and to the Canadian people. It allows raw beet sugar to be imported at a price that will prevent the farmers from taking hold of the beet industry as they should. Canada is sending to Germany and other foreign countries about 1,000,000 dols. per month for raw beet sugar, and the naturally yearly increase of consumption is about eight per cent., so that the future of the sugar beet industry, under a proper tariff, would be a lasting one and a great benefit to the farming community."

XII.—Natural Gas and Petroleum.

Natural Gas.

The existence of natural gas in Ontario was first discovered in 1889, being found in two well-defined areas, as the Essex county field and the Welland county field. It is chiefly near Buffalo, on Lake Erie, and near Windsor, Ontario, that the largest supplies are met with, though practically it may be got in nearly any part of the Niagara peninsula in small quantities. In 1901 there were 158 wells in operation, and 368 miles of piping were needed to distribute the gas. Much of the gas produced in Essex county was formerly led across the river to Detroit by pipe lines, but on representations made by the people of the Essex district to the effect that the supply of gas was not sufficient for home consumption, the Ontario Government passed an Order in Council in October, 1901, prohibiting the gas from the Essex field being exported to the States. None of the product of this natural gas field is therefore now being sent across the Detroit river; it is, however, still exported from the Welland field to the American side of the Niagara river, chiefly to Buffalo, N.Y. It may be mentioned that the landowners on whose farms the wells are located get their gas free in addition to being paid for the use of their lands.[64] The value of the gas produced in Ontario during the last ten years shows considerable fluctuations, being much less in 1903 than in the previous year, due, no doubt, to the Government prohibiting its export.[65]

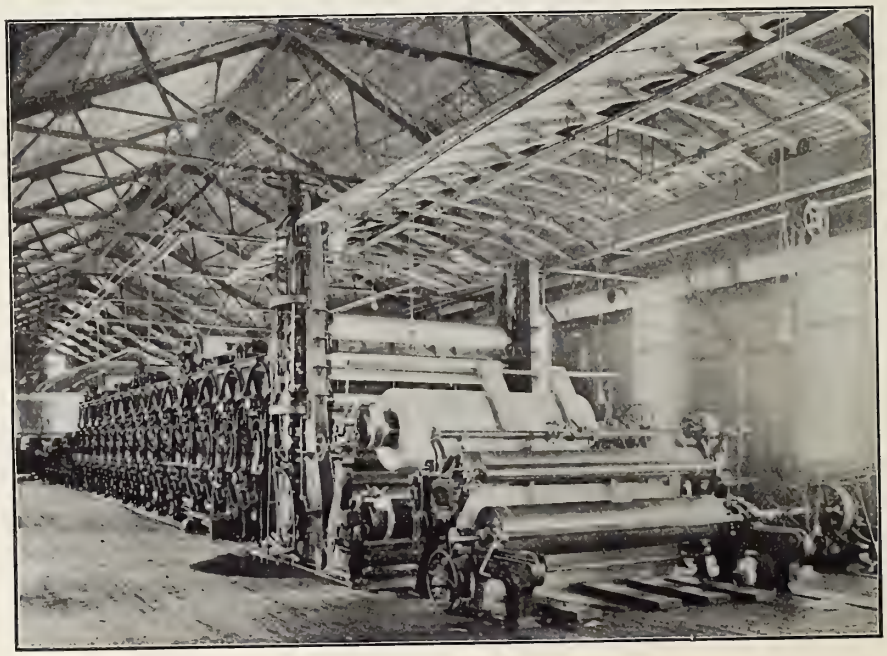
Petroleum.

This is one of the chief mineral products of the Dominion, though as yet the output is not sufficient to meet Canada's needs. The principal seat of the industry is at present in Ontario, where commercial quantities are found in the counties of Kent and Lambton. In the former there are two oil fields, one at Oil Springs, extending over 1,200 acres, and the other in the Petrolea district, 20 miles long by 2 wide,[66] In Lambton county the industry dates back to the year 1862. Petroleum is also found in Quebec, Nova Scotia, New Brunswick, and boring operations that have in recent years been carried on at Athabasca, near Edmonton, in the North-West Territories, point to a likelihood of that part of the country contributing largely to the future supply of mineral oil.

The industry is now one of the most highly organized in the Dominion; the system of drilling and pumping now used—the "jerker-line" system—enables a well yielding from eight to ten gallons a day to be profitably worked. This system has gained for itself a world-wide reputation; it is used in Galicia, Russia, Afghanistan, Burmah, India, Italy, France, California, and Australia. Its advantages are numerous; a central engine can operate a large number of wells; on one property near Petrolea, 233 wells, scattered over an area of 400 acres, are worked by a single engine. It is estimated that to sink a well of about 500 feet in depth costs only 125 dols.[67] In 1900, there were approximately 10,000 wells in operation, yielding on an average 71 barrels of oil each.

The refining side of the petroleum industry is largely in the hands of the Imperial Oil Co.,[68] which some years ago absorbed several other concerns, and of the Canadian Oil Refining Co. The plant of the former at Sarnia has a capacity of 60,000 barrels of crude oil per month, and the market for their products reaches from Halifax to Vancouver. Many of the bye-products of the refining process find a market in England and in Spain. The latter company have erected an up-to-date plant at Petrolea, on the site of one which was in operation some years ago, where all the products will be manufactured that modern science shows can be obtained from petroleum.[69] Improvements in methods of retorting have recently led to considerable quantity of the crude oil being used for gas making, 3½ million gallons being an estimate of the amount so employed.[69]

There has been a slight falling off in the production of oil during the past years: calculated as "crude" oil, the output in 1901 was 27 millions Imperial gallons, and in 1901 a little over 26½ millions.[70] In 1903 it fell to some 16 million gallons. A slow process of diminution seems to be going on in the area at present productive, and a falling off must be looked for from year to year unless this is counteracted by an extension of the oil-bearing territories.[69] Probably, the field about to be exploited in the North-West will alter the position somewhat, and an increase in the output may be confidently looked for.[71]



A Fourdrinier from the Dry End.

XIII.—Pulp and Paper.

Pulp.

As timber is one of the chief natural products of the Dominion, it is only to be expected that Canada should figure largely in the wood-pulp industry; the figures that might be given to indicate the number of cords of pulp-wood available throughout the country are so large that one could hardly grasp their real significance. The industry is not so young as many others that have been considered: in the census of 1871, no pulp-making plants are mentioned; in 1881, there appear five mills, employing 68 men, and having an output valued at 63,000 dols.; in 1891 there were 24, with a yield valued at more than a million dollars; while 1903 shows some 39 factories, from which the exported pulp alone amounted to over 5 million dollars.[72] The area of pulp-

(64) Report of the Bureau of Mines, Ontario, 1902.
(65) Statistical Year Book of Canada, 1903.
(66) The oil is found at depths varying from 370 to 400 feet.

(67) This and much of what is given here on natural gas and petroleum is from a paper by Mr. J. W. J. K. Vanston, read before the Canadian Section of the Society of Chemical Industry in Jan. 1903.
(68) Capital stock, 1,000,000 dols.
(69) Bureau of Mines Report, Ontario, 1902.
(70) Statistical Year Book, 1903.
(71) Total value of products of petroleum in Ontario in 1901, 1,467,940 dols. Bureau of Mines Report, 1902.
(72) Statistical Year Book, 1903.

making operations is not confined to any one Province, New Brunswick, Nova Scotia, Quebec, Ontario, and British Columbia are all represented in the industry.

The principal woods employed for pulp-making are white and black spruce, balsam, poplar, and pine; spruce[73] and balsam are those most generally used, on account of the special quality of their fibre and their colour, pine being utilized mostly for chemical pulp. The two main varieties of the pulp are *mechanical* and *chemical*. The former is obtained by grinding spruce logs to powder, the logs being pressed against a rapidly revolving grindstone, with water constantly supplied to prevent the friction causing a rise in temperature. A liquid pulp is thus obtained from which the water is squeezed by hydraulic machinery, a pressure of many tons to the square inch being employed. The resulting pulp still contains water, however, to the extent of from 50 to 60 per cent., though some works—notably those at Sault Ste. Marie—have introduced a machine specially constructed for the purpose of removing this large excess of moisture. Where the pulp is to be made at once into paper, this drying process is unnecessary. The specially dried pulp resembles paper very closely in outward appearance.[74] Chemical pulp is prepared by disintergrating and extracting the resinous matter from the wood —in the form of chips—by digestion with sulphur compounds, usually a weak solution of sulphurous acid, about a quarter of which is in the form of bisulphite of lime.[75] A soda chemical process is also employed by some makers. The sulphur used for the production of sulphurous acid is either imported from Sicily or obtained by burning pyrites. Chemical pulp possesses many advantages over mechanical pulp, though its manufacture is necessarily more expensive, and the yield per cord of wood, as compared with the latter, is much less.[76] It has a longer and tougher fibre, and, the resinous matter being no longer contained in it, finds uses for qualities of paper for which the mechanical pulp would be unsuitable. The principal markets for pulp are Great Britain, the United States, France, Australia, and Japan. Much of it is used, however, locally for the manufacture of paper. In 1903 the requirements of Great Britain alone amounted to 12,000,000 dols., a little over 7 per cent. of her needs.

Paper.

In many cases the producers of pulp also manufacture it into paper. The principal requisites for the paper industry are a plentiful supply of pulp-wood, good water and an abundance of it, and cheap power; all these can be found in many parts of Canada. The growth in the demand for paper of all kinds, news, wrapping, wall, and the finer grades, was one of the features of last century—especially news paper. The introduction of wood fibre into its manufacture has consequently enabled the supply to keep pace with the demand. The process of manufacture requires no description here; the secretary to a prominent Canadian firm states that originally they used rope as a raw material, then straw, which was abandoned for rags, and finally these gave place to chemical and ground wood-pulp. Previous to 1870 no wood whatever was used in the manufacture of paper in this country. Ground wood-pulp was introduced at that time and has since become the filling material of the cheaper grades of paper, being partly pasty and partly fibrous. Up to 1885 the real fibre—the framework of the paper —was supplied by rags. In 1885 sulphite pulp was introduced and has largely replaced rags, except in the higher grades of paper, in which linen is used, and in the very low grades, where straw is employed.[77]

(73) In 1894 it was estimated that Canada contained between 38 and 40 per cent. of woodlands and forests, or about 1,400,000 sq. miles, one half of this being spruce. The spruce area is thus 450 million acres. In all there are 4,500 million tons of pulpwood in sight. ["Pulpwood of Canada." Pan-American Exhibition pamphlet, published by the Geological Survey, 1901.]

(74) The Sault Ste. Marie Works used (1903) some 200 tons of spruce logs, yielding 150 tons of pulp per day.

(75) Letter from Mr. Carl Riordan, Merritton, Ont.

(76) One ton of mechanical pulp requires a little over a cord of wood; 1 ton of chemical pulp requires a little over two cords of wood.

(77) Mines Report, P.Q., 1901.

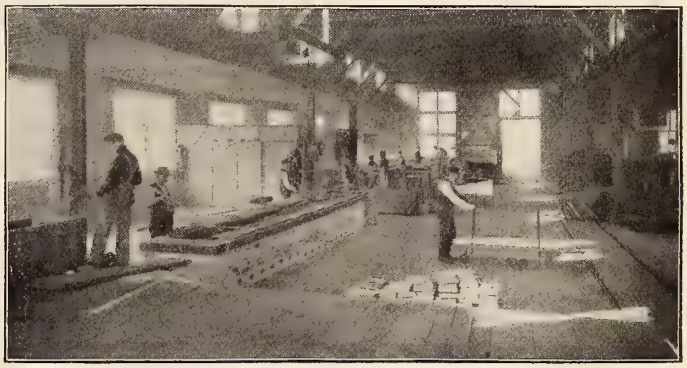
The *Toronto Globe* of March 4th, 1903, in an article on the wood-pulp industry, gives the following statistics, which are of interest:—

	Tons.
Production of mechanical pulp in 1902.....	155,210
Production of sulphite pulp in 1902.....	76,735
Production of soda pulp in 1902.....	9,044

XIV.—Asbestos and Mica.

Asbestos.

This mineral occurs in large deposits in the "Eastern Townships" of Quebec, where it was first worked in 1878; from 1880 up to the present date the production of asbestos has increased steadily; the output that year is given as 380 tons, while in 1901 over 38,000 tons are recorded in the returns furnished by the producers. The world's supply of asbestos is, for the most part, obtained from Canada, and the Quebec deposits have in the past proved to be the most profitable mineral mined in the Province. Thirteen mining companies are at work in this industry, which is principally carried on at Thetford, Lac Noir, and Danville, giving employment to approximately 1,000 men. Asbestos is shipped largely to Great Britain, the United States, Belgium, Germany, and France.



A Modern Galvanizing Shop.

Mica.

Another silicate found in Canada is mica, which, though occurring in small quantities, is a not unimportant industry; in Ontario there are several mines and a number of works where splitting, trimming, and sorting the material into saleable sizes is carried on. The Provinces of Ontario and Quebes produce the greater part of the mica used in the manufacture of electrical apparatus in the United States, and also export not inconsiderable quantities to Great Britain. The so-called "amber" mica, or phlogopite, is preferred for this use to other varieties on account of its superior flexibility and the thinness of the sheets into which it can be split. The mica mines of the General Electric Company in Ontario produce large quantities of mica annually, and the Company have trimming works at Sydenham and Perth. There are also important mica trimming plants in Kingston and Ottawa.[78]

Conclusion.

The new Canadian Niagara Power Company, whose works are in the course of construction at Niagara Falls should give a fresh impetus to the development of industrial chemistry locally: this will be the first company to produce power on the Canadian side of the Falls. A feature in the plant is the size of the generating units, each of which will have a capacity of 10,000 h-p. They will be more economical than generators of 5,000 h-p., will occupy but little more space and their cost will be much less per horse-power in comparison. It is expected that the output of the company will be used principally for Canadian industries and for such

(78) Letter from Mr. Thos. W. Gibson, Director of Bureau of Mines Ontario

public utilities in the Province of Ontario that may be within reach of long-distance transmission. The power on the American side is employed by some twenty or thirty firms engaged in such chemical industries as the manufacture of pulp and paper, silver plated goods, chlorate of potash, caustic alkali, salts of tin, carborundum, carbide, graphite, pure metallic lead, "alundum"—another emery substitute,—cereal food-stuffs, nitric acid and composite boards made from wood-pulp and flax-fibre. Judging from all this there should be a large increase in the number of chemical industries in this neighbourhood when the Canadian power station is completed and the current available from the Falls to Toronto.

The subjects that have been considered in this paper do not by any means exhaust the catalogue of chemical industries in Canada. Many important manufactures have, for the reasons mentioned in the opening paragraph, been omitted. A short summary of these will suffice. Matches, for example, constitute an important and necessary article of daily use, and are made in enormous quantities, practically all that are used in Canada being manufactured in the country. Brewing and distilling are carried on extensively also, ale, lager beer, and stout being made, while Canadian rye whisky is known throughout the whole English speaking world; even a "Canadian Scotch" is produced at Perth, Ont.; brandy and champagne and other wines are made at Hamilton, Brantford, and Pelee Island, on Lake Erie. Fruit canning is one of the great industries of Wentworth and Essex Counties, Ont.; bacon packing and salmon canning may also be classed among those manufactures requiring the careful supervision of the skilled chemist. To the list may be added explosives of all kinds; blackings, varnishes, japans, lacquers, paints and shellac, foodstuffs and sauces; antitoxines for use in the practice of medicine are made by the Parke Davis Co. at Walkerville. Natural mineral waters are abundant, at St. Catharines, in British Columbia and in Quebec, while manufactured aerated waters are made in mostly all the important towns. The almost universal wearing of indiarubber foot coverings during the winter season necessitates the production of large quantities of goods of this sort. Many large factories for this purpose are in existence, from which rubber goods of a superior quality emanate; dyeing and calico-printing might also be mentioned as being in a flourishing condition. The attitude of manufacturers towards chemists has of late years been extremely favourable, and many have seen it to be to their advantage to employ men trained in our universities to investigate the processes and materials employed in their particular industries. So far their employment has been amply justified by the results, and it is to be hoped that more may be brought to see the profit to be gained by adopting scientific methods of work. The university man who has specialized in chemistry can assist the manufacturers in this by bringing to bear on the *rationale* of the technical processes the general scientific knowledge which he has gained during his college course, and his experience of methods of research and manipulation; he can thus materially benefit his employer by improving the quality of his products or enabling him to turn out his goods at a cheaper rate. Let the manufacturer, be he dyer, tanner, pulp-maker, or ironmaster, indicate only that he is willing to find employment for men educated in the higher branches of scientific work, and the universities of the Dominion will supply them. Where chemical processes are used, it is essential for the prosperity of this country that all the available scientific knowledge should be brought to bear on them, in order that they may con-

(*Continued on page* 630).

Appendix IV. [90]

Portland Cement and Plaster of Paris.

Firm or Company.	Place.	Capital.	Capacity of Plant in Barrels per annum.	Output, 1902 (Barrels).	Date of Beginning Manufacturing.
		Dols.			
Crescent Cement Co.	Longue Pointe, Que.	200,000	..	..	..
Canadian Portland Cement Co.	Deseronto, Ont.	1,500,000	250,000	250,000	1893
Lakefield "	Lakefield, Ont.	590,000	75,000	75,000	1902
Imperial "	Owen Sound, Ont.	250,000	50,000	50,000	1902
Grey and Bruce "	" "	100,000	30,000	20,000	1902
Owen Sound "	Shallow Lake, Ont.	199,000	100,000	100,000	..
Sun "	Owen Sound, Ont.	500,000	40,000	40,000	1902
National "	Durham, Ont.	1,000,000	300,000	..	1903
Hanover "	Hanover, Ont.	150,000	30,000	30,000	..
		4,399,000			
Albert Manufacturing Co. (Plaster of Paris)	Hillsboro', N.B.	350,000	..	60,000	..

Appendix V.

Sugar from Beet Roots.

Company.	Place.	Capital.	Began.	Output.[91] July 02—July 03.	Output.[91] July 03—July 04.	Capacity in tons of beets per day.
		Dols.				
[92]Wiarton Beet Sugar Co.	Wiarton, Ont.	500,000	1901	1,565,000 lbs.	981,000 lbs.	350
Ontario Sugar Co.	Berlin, Ont.	1,000,000	"	6,063,926 "	7,059,695 "	600
[93]Dresden Sugar Co.	Dresden, Ont.	600,000	"	3,763,987 "	2,094,999 "	600
Wallaceburg Sugar Co.	Wallaceburg, Ont.	500,000	"	3,606,604 "	4,230,422 "	700
Knight Sugar Co.	Raymond, N.W.T.	1,000,000	1903	——	——	300

(90) See note 89. (91) Letter from Mr. C C. James, Deputy Minister of Agriculture, Ontario. (92) Now closed down. (93) Removed to Michigan.

Insurance Department

INSURANCE COMMITTEE.

Review of the Month's Work as Presented in the Report to the Executive Council.

The work of the Insurance Department since the last meeting has proceeded along the lines indicated in previous reports, and the following is a summary of the more direct work that has been carried on:—

1. We have reported upon the financial standing of the companies insuring the plants of two members, carrying an aggregate insurance of $204,800.

2. We have examined and reported upon the policies of insurance covering the plants of six members, carrying an aggregate insurance of $271,465.

3. We have inspected the premises of ten of our members with an aggregate insurance of $412,550.

The total insurance dealt with in each of these three sections was $888,815, representing action in connection with eighteen of our members. It will be interesting to record that since the organization of the Department we have been brought in direct contact with forty of our members, whose aggregate insurance has amounted to $2,493,391.

All that was said in our last report regarding the deficiencies in policies and the general neglect to comply with the full force of the co-insurance clause, has equal application to the work of last month.

Toronto Auxiliary Fire System.

The Executive Committee of the Toronto Branch, having concurred in a suggestion that the Insurance Committee should deal with the subject of the auxiliary fire system of Toronto, a special committee, consisting of Messrs. Burton, Tindall, Murray, Candee and Jephcott, with the Manager of the Department, was appointed to take such steps as might be deemed advisable to urge upon the civic authorities the necessity of completing the new system thereby carrying out the clearly expressed wishes of the citizens with the utmost expedition. The sub-committee interviewed the city engineers and were informed fully as to the steps that have been taken to install the new system. They are pleased to record that everything is being done that could be done to expedite the work, and they have the gratifying assurance from the engineer that the additional protection will be in operation before the close of the present year.

The Advisory Committee of the Department will keep the matter before them.

Overhead Wires in Congested Districts.

The committee also had before them the subject of overhead wires in the congested district, and as the Chief of the Fire Department reports that it is the intention of the city to ask for necessary legislation during the present session to compel the placing of all electric wires in the congested districts underground, it was decided to confer with the civic authorities with a view to offering the fullest co-operation of the Association in securing this most desirable result.

It was also suggested that the Montreal Branch, through its Advisory Committee, should take the necessary action to bring the matter to the attention of the authorities of their city.

Uniform Hose Couplings.

In the recent lecture delivered by Mr. J. B. Laidlaw, before the Insurance Institute of Toronto, a suggestion was thrown out that municipalities should have a standard size of hose and uniform couplings, and the committee consider the suggestion of sufficient importance to enlist the co-operation of the council. The following resolution was passed by the committee, and is now submitted for consideration and action:—

Resolved: That the Executive Council, through the Municipalities' Association, or in such other manner as may be adopted by them, make an effort to secure uniformity of hose and couplings throughout the various Provinces of Canada, and that when these cannot be had, reducers or exchange couplings should be obtained and standards established and numbered, so that in the event of one town being called upon to help another in the event of a serious fire, there should be no unnecessary delay in rendering prompt and efficient aid, through hitches due to a variety in size or threads of couplings.

P. H. Burton,
Chairman.

THE IMPROVEMENT OF RISKS.

Review of the Month's Work as Presented in the Report to the Extras may be Reduced.

In the March number of this paper, at the conclusion of our monthly article, reference was made to the desirability of manufacturers improving their own risks, for the double purpose of reducing the fire waste of the country and lessening to themselves the burden of the insurance tax. The first motive may not, on its face, appeal to the manufacturers with sufficient force to lead them to spend money in making desirable improvements, although a moment's reflection will show that a reduced fire waste must, per se, result in a corresponding reduction in the fire rates. But in the second motive there is presented a consideration that must appeal directly to every manufacturer, for there is offered by the companies through their organized tariff associations an immediate reduction in rate for every improvement made. The directions in which improvements may be made may not inappropriately be referred to at this time.

The Insurance Schedule.

Before entering upon the question of "improvements," it seems advisable to the writer to call the attention of our members to certain general considerations which the experience of the past two months show him are not properly appreciated. Few of our members, judging by our recent experience, realize that the rates they are paying are made up under a schedule applied as a result of the visit of an inspector of the Underwriters' Association; moreover, that it is only the duty of the inspector to report to headquarters the risk as he finds it on the day of his visit. The schedule we have referred to starts with the definition of a standard factory, fixes a basis rate for such standard, and adds a charge for every deficiency. Every member of our Association should therefore obtain a statement through the agent with whom his business is placed showing exactly how his rate is made up; this is the first step to take, and if the agent is not sufficiently posted to indicate how many of these extras for deficiencies can be wiped off, or is too eager to maintain high premiums for the sake of the higher commission it gives him, it should not be difficult for the manufacturer to obtain the proper advice from our Department or elsewhere.

Illustrating this point, the writer was called upon recently to inspect an agricultural implement factory, and, as is his custom, first obtained the details of the rating. Amongst the extras it was noticed that the assured was charged 50c. because painting was carried on in the main building (the building which carried more than one-half the total insurance). On the attention of the assured being called to this particular feature, he stated that painting had not been done in that building for two years and for that

length of time he had been paying the insurance companies a rate of one-half per cent. more than he had any occasion to do. The remedy as to the existing rate was soon applied, but the excess of the premiums was not repaid, and that amount stands as a loss as a result of inadequate knowledge on the assured's part as to how his rate was made up.

Preparatory, therefore, to the consideration of how improvements may be made, let each manufacturer obtain the information as to how his rate is now made up, and it will be quite apparent to him what he can do to make alterations (often at small cost) that will either cancel altogether or materially reduce the extras he is charged for deficiencies from the standard. Our Insurance Department may be found of advantage in the settlement and adjustment of difficulties along this line.

New Schedule Ratings.

Before passing from this point, the attention of our members should be drawn to the fact that the Canadian Fire Underwriters' Association is about issuing a series of new schedule ratings for manufacturing risks which will raise the standard; a lower basis will be applied than now exists, but a great many more deficiencies will be provided for and the extras now charged will in many cases be increased. Until these new schedules are applied more or less uncertainty must prevail, but it is safe to say that the effect will be to still further increase the rates applicable to inferior risks. On the whole, however, the new schedules should be welcomed, for they will be prepared in the light of modern business requirements, by an intelligent application of which it should neither be difficult nor expensive to obtain rates much lower than they are at the present time. The writer believes this will be an honest attempt of the Underwriters' Association to produce and maintain scientific ratings, and, if our members will grasp the opportunity their promulgation will afford, the result will be to the advantage of the country in a reduced fire waste, and equally and as surely to the advantage of insured and insurers.

Reduction in Rate Will Follow Improvement in Risk.

As we have not seen the new schedules, we are not in a position to take up the consideration of the question "How to Improve Risks" with anything like the fulness or satisfaction the importance of the subject warrants, but we think we are safe in saying that, along certain general lines, improvements now made will carry corresponding and commensurate reductions in the new schedules that are soon to be issued. It will, therefore, be understood that the following suggestions do not exhaust the subject, but only indicate the general lines upon which it may be safe to proceed at the present time.

Construction. In erecting new buildings our members should see that they are erected on what is commonly called "Mill Construction" principles. Much misconception exists among architects, contractors and manufacturers as to what "Mill Construction" is, and it is impossible in this article to deal with the subject. Those of our members who are interested in the subject may obtain full information from the Department. In the buildings now erected rates may be reduced by eliminating all vertical openings. Open stairways are charged a minimum extra of 10 cents; elevators and hoists an extra 10 cents; open hatchways and well holes also 10 cents, but generally speaking these are not cumulative above 15 cents.

Heating. Remove all stoves and obtain heating from steam generated in a detached power house; many manufacturers are charged an extra rate of from 25 to 75 cents because of the presence of coal stoves which might easily be removed.

Lighting. An extra rate of 25 cents is generally charged for lighting other than gas or electric light.

Power House. A defective power house is a most common cause of a heavy extra rate which varies from 50 cents to 10 cents, according to its location and means of cut-off from the factory. A brick wall with a standard fire door cut-off will frequently be sufficient to eliminate this extra rate. The saving in rate effected by a standard power house pays good interest on the cost of its construction.

Fire Appliances. A supply of casks and pails properly distributed saves 25 cents; a stand pipe and hose a further 10 cents; a watchman and watch clock 25 cents.

There are particular features of each class of risk which call for extra rates, but as no two classes are alike it is scarcely possible to suggest any common course of action.

By way of further suggestion it may be urged that all hazardous or extra hazardous processes carried on by each particular manufacturer in his own line of business should be conducted as far as possible in detached buildings, or in those portions of the property where the least amount of insurance is carried; the reason for this is obvious. Our experience shows that many manufacturers have not viewed the insurance situation in this light, and it certainly affords food for thought.

In respect to all these matters the Insurance Department will be glad to render the fullest advice and assistance.

Finally, the best results are obtained at all times and under all conditions by installing a standard system of *Automatic Sprinklers.*

E. P. Heaton,
Manager.

TORONTO EMPLOYERS' ASSOCIATION.

The annual meeting of the Toronto Employers' Association, held on April 6th last, was probably the most successful in the history of the organization. Nearly every member was present, and the greatest interest was taken in the splendid showing from all departments.

The report presented by the Secretary showed largely increased activity in the work of the Association. It was in part as follows:—

Report of the Secretary.

"The Association has found its place as a necessary adjunct to our industrial development. As long as employers are required to engage labor, so long will there be the need of an Association which is expert in its way in dealing with the labor question. The success of this Association has demonstrated the fact that employers are able to combine and successfully protect their interest from aggressive attacks of organized labor.

"The varied classes of industry that our members are engaged in, and their consequent divergent needs, has given a breadth and scope to the work of the Association that is capable of ministering to the wants of every department of industry.

"The Association has not alone been concerned with the protection of employers, but has endeavored to protect the free workmen as well, and to act as a medium through which he may obtain employment without the necessity of belonging to labor organizations.

"In looking back over the past year's work and its comparative freedom from industrial disputes, we feel that the comparative immunity from labor difficulties has been due in no small measure to the stand taken by this Association, and the protection afforded to its members by connection with it.

"The membership has largely increased and the reserve fund at the credit of the Association has been materially added to. During the year the Association has been of great assistance to workmen in procuring situations without any cost to themselves. For the twelve months ending March 31st, 2,185 in all departments of industry have applied at the office, and nearly the whole of this number were directed to positions such as their qualifications warranted. A number of letters have been received from these workmen testifying to the value of the Association in procuring ready employment for them.

"The office has issued during the year a form of apprenticeship articles which has already been applied for in all parts of Canada, and which is in use in a great number of shops in the city. A codified set of shop rules was drawn up and has been uniformly adopted by the members. A record card for employees

was also prepared to be used in connection with the time sheets, and this has met with favor and is now in use in many of the factories."

An Employment Bureau.

The question of establishing an employment bureau in connection with the work of the Association was discussed favorably. At this bureau, without any cost whatever to the men, employees of all kinds would register for positions and an effort would be made to find work for them. The Bureau would make a specialty of ascertaining what the current wages are, of differentiating between various classes of workmen, of classifying them into different degrees of proficiency, and ascertaining from former employers what their records have been with reference to skill, workmanship, etc. Vacancies for workmen reported from any of the firms would be filled by those registered on the unemployed list. It would be known at the central office exactly how the trade was supplied with men at any time. In case of a shortage the head office would endeavor to bring in just sufficient workmen to keep the trade supplied, and in case of an over supply of labor it would endeavor to find positions for the unemployed in other districts.

It is felt that such a bureau, if properly managed, will be of great assistance in promoting more cordial relations between employer and employee, and that it will go far towards correcting the unfortunate impression, prevalent among the unions, that the employers are attempting to flood the labor markets of this country by encouraging the immigration of foreigners.

The officers of the Association for 1905 are:—President, D. H. McKay; 1st Vice-President, W. C. Phillips; 2nd Vice-President, W. H. Carrick; Treasurer, W. T. Kernahan; Secretary, James G. Merrick.

BOILER WATERS AND BOILER SCALE.

How the Latter may be Prevented by Improving the Former—Some Practical Suggestions by Practical Men.

The prevention of boiler scale, a question of vital interest to every user of steam power, formed the subject for two interesting papers read before a recent meeting of the Canadian Section of the Society of Chemical Industry. The first, by Mr. Albert M. Wickens, of the Canadian Casualty and Boiler Insurance Co., discusses the matter from the standpoint of the practical engineer.

After remarking that he had spent his whole life in connection with engines, boilers and steam plants generally, as an erecting engineer, as an operating engineer, and latterly as an inspector, the writer proceeded to state that he had arrived at some well-defined conclusions regarding feed waters and scale, which were embodied in the following paper.

Boiler Waters.

The boiler room is usually regarded as a miserable, dirty place to be kept out of sight as much as possible; it is crowded into some odd corner in the basement, and is seldom kept clean either inside or out. As a matter of fact, it is the very heart of the entire establishment, and the neglect which results in a short and wasteful life is the poorest economy possible. The faults may be many; faulty construction, bad setting, poor chimney draft, bad stoking, poor fuel, impure feed water, and dirt in general. For good economical work the surfaces of the metal must be clean, inside and out, a coating on either prevents the transmission of heat and often results in leaky joints. As a standard may be taken a well-set, well-fired boiler which will utilize from 70 per cent. to 75 per cent. of the heat given off by the burning fuel.

All waters carry more or less mineral or organic matter, some indeed, so much that they they are unfit for boiler use; a feed water carrying from 20 to 40 grains of solid matter per gallon may be said to be a good water for this purpose. Taking the evaporation of 34 lbs. of water per hour to represent one horse power, a 100 horse power boiler would need for a day of 10 hours, 34,000 lbs. of water, or 3,400 gallons. If now the feed water contains 20 grains to the gallon, and assuming that the specific gravity of the scale is three, there would be formed of the latter 50 lbs. per week of 60 hours, which would cover 250 square feet to a thickness of 0.0144 inch, and in one month the thickness would increase to 1-16 inch.

Many experiments have been made to determine the loss of heat caused by scale of different thickness and varying composition, and it is now generally accepted that hard scale 1-16 inch thick requires from 10 per cent. to 13 per cent. more fuel, while a thickness of ⅜ inch renders necessary an increase of 40 per cent. in the fuel.

Our river, lake and well waters usually contain as scale-forming constituents, the bi-carbonates of lime and magnesia, sulphate of lime and small quantities of silica. On entering the boiler, the bi-carbonates are decomposed into carbon dioxide and the carbonates, the latter settling to the bottom to form scale; in consequence there is always a heavy deposit near the discharge from the feed water pipe. The carbonates of lime and magnesia deposit as a fine powder, which may harden in the presence of sulphates to a tenacious scale, and it is advisable to have a surface blow-off fitted to all boilers so that at least twice a day all floating matter may be blown off. When the water carries iron salts or chloride of magnesia, the surface of the scale next the metal is covered with a thin black layer of iron oxide and the plate shows unmistakeable signs of having been attacked. Owing to the excellent circulation from ebullition the scale generally lodges in the stiller portion of the boiler, leaving the space over the grate comparatively clean. Sometimes, however, a large mass of scale, too heavy to be removed by the circulating current, will fall upon the latter part, and a considerable thickness will soon accumulate, resulting in the heating of the plate to redness, when the pressure will produce a bulge or even a rupture and explosion. Again, the scale may form upon the tubes in such quantities that the passages between them are entirely blocked, resulting in a drop of 50 to 60 per cent. in the efficiency of the boiler, accompanied by serious damage.

There are many boiler compounds for sale, most of them containing common soda, but tri-phosphate of soda, caustic soda, concentrated lye, chloride of barium, sal ammoniac, hydrochloric acid, catechu, nut galls, and tannic acid are also used. A slimy substance to prevent the scale from adhering to the metal, such as Irish moss, potatoes, oil, linseed, sugar or molasses is often employed. Some of the compounds, far from being beneficial, are positively detrimental.

The best methods of overcoming the difficulty are (1) treating the water before entering with chemicals, (2) passing the water through a heater. Water softening plants are being installed very generally for large consumers, and are proving a paying investment; they cost from $3 to $5 per horse power for the apparatus, and from 1 to 2½ cents per 1,000 gallons for chemicals. In the second method the water is heated up outside the boiler and deposits a large amount of the scale-forming constituents before entering.

Some recent experiments by Sir A. Durston show the effect of oil in boiler waters. It was found that the difference in temperature between the inside and outside of a clean boiler plate was 430°, while if the inside had a thin coating of grease the difference rose to 617°, or 167° higher. In practice the presence of oil in feed water always leads to leaky joints and tube ends, as well as buckles and waves on the bottom of the boilers. This trouble may be avoided by the use of suitable separators.

An ordinary return tubular boiler, well taken care of and using good water, will last for thirty years and be safe the whole time, while if the water be bad and the care worse, ten to twelve years is all the life that is to be expected. There will be very little trouble if the boiler gets as much care and attention as the rest of the factory.

After this discussion of the subject from the standpoint of the engineer, the chemical aspect was taken up by Prof. James H. Bowman, chemist to the Canada Chemical Manufacturing Co., Ltd., London. The following is an abstract of his paper:—

The Supply of Water for Steam Boilers, and the Prevention of Boiler Scale.

The history of the steam boiler as an agency for the conversion of heat into power has been marked by constant improvement, and although it has been frequently prophesied that the limiting efficiency had been reached, such predictions have proved erroneous. As business competition produces the keen financier or the bankrupt, so it is with our methods of manufacture. The history of artificial illuminants furnishes an apt illustration. The candle, outrivalled by gas, is improved by substituting paraffine for tallow; gas again leads; then the electric light enters the race, but is only beginning to score when the Welsbach mantle is invented; and so, see-saw, the battle has raged. Similarly electricity, the water turbine and the gas engine are competing powerfully with the boiler to-day, and if the latter is to maintain its position, every effort must be made to secure the maximum efficiency.

In a paper read by Professor Cohoe before the Canadian Section of the Society of Chemical Industry it was pointed out that owing to losses in the combustion only 80 per cent. of the heat of the fuel is communicated to the boiler under the best conditions. The average efficiency would probably not exceed 60 per cent. A second group of losses is consequent upon the conduction of the heat to the water and the conversion of the water into steam; to this our attention will be directed.

Since water is a great solvent of solids and gases, it takes its character from the country which it traverses, and the waters of Canada are as varied as its soils. In Ontario the former may be roughly divided into three classes. If a line be drawn east and west at a point 100 miles north of Toronto, the waters found to the north of this are simply ideal as regards scale-forming constituents. As a typical case it may be mentioned that no lime salts occur in the waters of the Magnetawan River. Possibly the hemlock logs and bark which are abundant in these northern waters supply tannin which precipitates the salts of lime. To the south of the line referred to, we have waters of a second class, those of the Great Lakes, which are of fair quality and do not form a heavy scale. A third group comprises the river, spring and well waters of southern Ontario, and these are usually heavily charged with the carbonates and sulphates of lime and magnesia derived from the underlying limestones. Where dolomites occur, as at Paris, Berlin and Brantford, the waters are uncommonly bad.

The loss of heat due to the formation of scale has already been discussed in the previous paper, and it is obviously very desirable to free the feed water from its scale-forming constituents. This will generally be achieved by removing the carbonates of lime and magnesia and the sulphate of lime, the two former producing a soft scale and the last a coating like adamant. In a reasonable treatment of a water the following chemicals may be used:—lime, carbonate of soda (soda ash), tannate of soda, caustic soda and tri-sodium phosphate. There are in addition innumerable boiler compounds on the market, of the most varied composition; they are used in the boiler, and produce a softer scale, but this advantage is offset by the increased tendency to foam.

In any rational system of treatment as large a proportion as possible of the carbonates of lime and magnesia should be precipitated before the water enters the boiler. This may be achieved by either a mechanical or chemical process.

The mechanical method relies on the heater, is quite effective, and should be used in all systems where there are stationary boilers. By heating the feed water to the boiling point, the precipitation of most of the carbonates of lime and magnesia is effected, leaving however the sulphates and chlorides of lime and magnesia, which may be removed by a subsequent chemical treatment if necessary.

The chemical method may be best described by some illustrations. Where a water, containing the carbonates and sulphates of lime and magnesia, cannot be readily heated, it is treated with the proper amount of lime which precipitates the carbonates of the two elements. It is then mixed with a soda ash solution which results in the removal of the rest of the lime; the water is then filtered and supplied to the boiler in a fairly pure condition. There is probably no method cheaper than this, and it is especially adapted to very impure waters.

Or the carbonates of lime and magnesia may be precipitated by passing through a heater, followed by treatment with soda which further purifies the water; this is also a good method, but does not in practice completely remove the scale-forming constituents.

Again, small quantities of tannate of soda or tri-sodium phosphate may be fed into the boiler along with the feed water; these produce a light flocculent precipitate which may be "blown off," a salutary operation for other reasons as well. These two chemicals may also be used outside the boiler; a comparison between them may readily be made on the basis of cost and efficiency of treatment.

In any of these illustrative cases the cost of purification for say Lake Ontario water, would be less than 1½ cents per 1,000 gallons.

In some industries pure water is much to be desired; for example, in tanning the lime of a hard water robs the hemlock bark of some of its tannin, while in those cases where much soap is used, it is worth remembering that each grain of lime per gallon destroys 1½ lbs. of the best hard soap per 1,000 gallons of water.

To conclude, if you want to save coal, if you want to save repair bills, if you want to prevent shut-downs, if you want to lengthen the life of your boilers, if you want to increase their efficiency, then scale formation must be prevented.

The Novel-Ti Company, a Peterboro', Ont., concern, are applying for letters of incorporation. The proposed capital is $40,000. They will manufacture up-to-date men's neckwear, and are now installing the machinery necessary for this class of work.

A note in our April issue with regard to the business of J. Arthur Paquet, Quebec, appears to have been incorrect. No changes, we are informed, have taken place as a result of the death of Mr. Z. Paquet, Sr. The retail business always has been and is still conducted under the name of Z. Paquet, while the wholesale firm, ever since its establishment, has been known as J. Arthur Paquet.

Salesmen Wanted.

A large manufacturing firm in Western Ontario desires to secure the services of two energetic and experienced salesmen to sell their mill and other machinery in Ontario and the Maritime Provinces. In answer to the above, address Secretary, Canadian Manufacturers' Association, Toronto.

Transportation Department

DEMURRAGE CHARGES.

The complaint of the Canadian Manufacturers' Association respecting demurrage charges by railways was heard at Ottawa on the 23rd of March by the Board of Railway Commissioners.

The Association was represented by its transportation manager, Mr. Marlow, who was accompanied by a deputation representing various sections as follows: lumber—Mr. W. J. Smith, Toronto, Mr. A. A. Wright, Toronto, Mr. W. J. Aitchison, Hamilton, Mr. Thomas Patterson, Hamilton; iron and steel—Mr. R. Hobson, Hamilton; bridge construction—Mr. W. B. Champ, Hamilton.

The Dominion Millers' Association also appeared, represented by their secretary, Mr. C. B. Watts, Toronto.

The railway representatives were: for the Grand Trunk Railway—Mr. M. K. Cowan, K.C., solicitor; Mr. A. E. Rosevear, general car accountant; Mr. M. C. Sturtevant, car service agent: for the Canadian Pacific Railway—Mr. J. E. McMullen, solicitor; Mr. J. Oborne, general superintendent; Mr. G. S. Cantlie, superintendent car service; Mr. F. A. Gascoigne, car accountant: for the Canada Atlantic Railway—Mr. C. J. R. Bethune, solicitor; Mr. W. P. Hinton, traffic manager: for the Michigan Central Railroad—Mr. Carl Howe, assistant general freight agent.

The proceedings commenced at 11 a.m. Objection was made by counsel of Grand Trunk Railway to the hearing of complaint of the Canadian Manufacturers' Association on the ground that a written statement of complaint had not been furnished to the various interested railways. After some delay, the case was allowed to proceed.

The objectionable features of the Canadian Car Service Rules as outlined in a general way in the February and March numbers of INDUSTRIAL CANADA were explained to the Board in detail. Comparisons were made with the rules in force in the United States under the jurisdiction of Railway Car Service Associations and also with rules issued by State Railway Commissioners. Throughout the argument numerous instances were cited to show the impossibility of avoiding demurrage charges under the car service rules as enforced by Canadian railways. Attention was called to the increase in the size and capacity of freight cars since the introduction of car service rules and to the fact that no extension has been made in the time allowed for loading and unloading, but, on the contrary, in the case of certain coarse freights, the time has been reduced. The bunching of cars by railways was shown to be the direct cause of a large proportion of the delays for which demurrage charges are collected. Particular attention was given to this feature, and the Board was asked to consider the advantages of a reciprocal plan of demurrage charges to prevent bunching or an average plan for unloading freight cars to relieve shippers from unreasonable demurrage charges. It was urged that the Board should draw up a set of rules which would properly measure the relationship between the shipping public and the railways in the matter of loading and unloading freight cars and the application of demurrage charges thereto. The following provisions were suggested to be embodied in such rules, viz.:

(1) A reasonably sufficient time to be allowed for loading and unloading of all freight, having regard to the increased size of cars and the average facilities available at all points for loading and unloading.

(2) The free time formerly allowed for unloading coal, coke, lumber, to be restored and extended to cover brick and ore.

(3) Free access to be given to cars at all times during the period allowed for loading or unloading. Any time lost through interruption for which the railway is responsible or the consignee is not responsible to be allowed and added to the regular free time.

(4) Saturday afternoon to be exempt, the same as a legal holiday.

(5) Relief to be granted where cars are bunched in transit and delivered to consignee in greater numbers than he is able to handle; such relief to take the form of reciprocal demurrage or average arrangement.

(6) Notice of arrival to be compulsory and to be a condition precedent to the application of demurrage charges.

(7) Reasonably sufficient time to be granted distant consignees for loading and unloading.

(8) When freight is in bond, sufficient time to be allowed at customs port for entry, inspection and delivery of warrant, in addition to the regular time for notice of arrival and unloading.

(9) Where freight is refused by consignee or consignee cannot be located, railways to be required to give prompt notice to shipper, who is to be allowed reasonable time, say, three days, in which to instruct as to disposition.

(10) Where cars are required to be re-weighed, in event of the original weight being confirmed, the railway not to be permitted to charge demurrage in excess of the actual time necessary for the switching from siding to track scale and return to consignee, say, maximum one day.

(11) The present territories under the jurisdiction of the car service managers to be split up and officers nominated by railways who will at all times be easily accessible, and from all points, so that disputes or special cases may be promptly ruled upon, avoiding the necessity for payment of demurrage and subsequent application for refunds where the money should not have been collected.

(12) When weather conditions make removal of freight impracticable, free time to be extended so as to allow the regular period of free time of suitable weather to load or unload.

(13) When claims are presented to railways, arising from application of car service rules, a time limit to be set within which adjustment is to be made, say, thirty days.

(14) Railways to be required to correct their bills of lading, forms of contract, classification and tariffs so as to conform to the rules governing demurrage to be issued by the Board.

Messrs. Smith, Hobson, Aitchison and Champ addressed the Board with regard to the unreasonable features of the car service rules as applied to their respective interests. A resolution from the Lumbermen's Association of Ontario, protesting against the unfair conditions and joining with the Manufacturers' Association for an equitable adjustment of demurrage regulations was also handed in.

Mr. C. B. Watts, Secretary of the Dominion Millers' Association, addressed the Board at length showing the difficulties under which the millers labor owing to the one-sided nature of the car service regulations.

Mr. M. K. Cowan, K.C., counsel for the Grand Trunk Railway, intimated that the complaint would have consideration by the interested railways and reply would be made in due course. He stated it would be difficult to devise any rules which would be acceptable to all interests, but that if the present demurrage rules

were found to be unreasonable, the railways would no doubt be willing to make certain modifications.

Mr. J. Oborne, who has had considerable experience in car service matters, on behalf of the Canadian Pacific Railway recommended that a joint committee including representatives from the car service departments and representatives of the interested shippers be appointed to consider amended rules. In this suggestion Mr. Cowan and Mr. Rosevear, representing the Grand Trunk Railway, concurred.

It is expected that the railways will shortly be in a position to make reply to the Board or to carry out the suggestion for a joint conference between their representatives and the shippers for the purpose of reaching an amicable adjustment of the present difficulties by mutual agreement upon a modified set of car service rules, which it is hoped will be acceptable to both interests.

THE RAILWAYS AND THE RAILWAY COMMISSION.

The Case of the Dominion Millers.

Among the several difficulties which the merchants and manufacturers laid before the Railway Commission in June last, when the Board held its first sitting in Toronto, was that of the Dominion Millers' Association, with regard to export rates on flour and mill products. This case was presented by Mr. C. B. Watts, representing the Dominion Millers' Association and by the Association's Department of Transportation. The Association was urged to assist in the discussion by the importance of the matter to its exporting millers.

The case was, briefly, that the Canadian railways—it might better be said the Ontario railways, because the complaint attaches to an Ontario rate situation—are disposed to require somewhat higher export rates upon flour and grain products forwarded from Ontario than they quote to carry the same commodities from longer-distanced shipping points situated in Michigan. The Ontario shipping points are largely intermediate, lying between the Michigan shipping stations and the seaboard, in the direct line of transit.

It is not the intention to deal with all the phases of this case, though it might be stated that in its argument the Associations stated the following facts which the railways have never disputed.

(1) That the rates from United States shipping points to Montreal for export are lower than from the Canadian shipping points (largely intermediate and in the direct line of transit).

(2) That to Philadelphia and Baltimore for export the rates are respectively 1 and 3 cents per hundred lbs. lower from United States than from intermediate Canadian shipping points to the same export ports; instances—Detroit and Windsor or St. Thomas.

(3) That Canadian shipping points do not enjoy to Canada's national summer port, Montreal, rates reasonably related to the rates from United States shipping points, mileage considered.

Before passing from these points, it might be stated that under the Interstate Commerce Act, if these Canadian points were directly subject to the Act, this anomalous condition of affairs would be impossible. That Act requires in this connection that rates from intermediate points shall not be higher than from more distant points. The United States Act actually does apply to the Canadian rates and is sometimes quoted by the Canadian roads as applying. Though the United States Act is broad enough in its scope to apply to Canadian rates, it is not reasonable to expect the Interstate Commerce Commission to exercise itself in defending the Canadian shippers, especially so, when its defence would assist foreign (Canadian) millers to compete on favorable terms with home (United States) millers. This was not the purpose of the United States Act.

Leaving aside the influence of the Interstate Commerce Commission and the bearing which the Act to regulate commerce should have upon Canadian rates, leaving aside the question of long and short hauls which unquestionably disposes, for Canadians under the Canadian Railway Act of 1903, of the long and short haul phase of this difficulty, there is another phase of the matter which cannot rightly be overlooked, and that is the position of the Canadian millers who are situated off the direct line of transit from the United States to the seaboard. Here the Associations urged a decision of the Interstate Commerce Commission which can be applied to the Canadian rate situation because of its fairness and because it clears up the equity of the question. That decision was briefly that localities, whether directly situated upon the line of transit or not, were entitled to a relative system of rates, in so far as those localities were competing in a common market through their similar industries with industries elsewhere located. Kalamazoo, because it is situated on the direct line of transit from Chicago to the seaboard, would enjoy its rightful relationship to Chicago in the matter of rates for, say, flour; but Hart, Michigan, because it was competing with Chicago and Kalamazoo though not intermediate to Chicago, should be conceded a relative basis of rates. A railway which undertakes to handle a line of traffic at low rates from one point, whether for special competitive or other reasons, cannot be excused from handling at relative rates the same traffic from other points sustaining a similar relationship to the traffic.

Passing from these phases of this question, it is desirable to consider but one feature of the reply as presented by the railways jointly. It is not clear that all the railways subscribing to this reply are similarly interested, or that they all subscribe wholly or merely partially to the document. The signatures to this document of representatives of the Wabash, Michigan Central and Pere Marquete Railways are conspicuously absent. If a momentary digression is pardonable, it might here be surmised that these United States railways, operating through southern Ontario, are heartily in sympathy with the action of the Canadian trunk lines, though motives of policy have probably restrained them from introducing into Ontario the broad and reasonable interpretation of the rights of shippers and manufacturers to which elsewhere they are willing subscribers.

To return again to the subject, the reply of the Grand Trunk, the Canadian Pacific and the Canada Atlantic Railways. It is herein stated that circumstances are so far different in Canada to those prevailing in the United States that the Canadian roads are wholly justified in charging higher rates from Canadian than from United States points upon the same goods competing, as are the products of the flour mills, in the same foreign markets. It would seem to be a matter of good judgment that the railways of Canada should divest themselves of any responsibility for Canadian products failing to take secure hold against United States competition in the markets of Europe by conceding reasonably relative rates. If after such rates were conceded the Canadian millers still failed to make good, the responsibility would be otherwise than at the doors of the Canadian railways. This is not the stand of the Canadian railways. They seek to buttress their refusal to comply with the request of the millers with various statistics such as those regarding the population of Canada and the United States and the cost of operating branch and other lines when traffic is not voluminous.

The number of inhabitants in the various northern States are quoted to show from the standpoint of population that Ontario directly, and Canada indirectly, is comparatively uninhabited, while, from the standpoint of area, the Canadian provinces are large enough to accommodate several of those densely populated states. To quote from the document:

"We think we may further consistently invite your attention to a comparison of the following figures and assuming Wisconsin to be 100 per cent., the relative conditions are:

	Population.	Land in Sq. M'ls.	Populat'n.	Land in Sq. M'ls.
Wisconsin	2,069,042	54,450	100%	100%
Minnesota	1,751,394	79,205	85	145
Michigan	2,420,982	57,430	117	106
Massachusetts	2,805,346	8,040	136	15
Connecticut	908,420	4,845	44	9
Ohio	4,157,545	40,760	201	75
Rhode Island	428,566	1,053	21	2
Ontario	2,182,947	220,508	105	405
Quebec	1,648,898	341,756	80	628
New Brunswick	331,120	27,911	16	51
Nova Scotia	459,574	21,068	22	39

We think this condition justifies the Canadian railways in arguing and claiming that they are entitled to a higher basis of rates than prevails in the States of Michigan, Wisconsin, Minnesota, etc."

The railways overlook the important fact that with the denser population of these states there are more railways to compete for the traffic. The fact that population is denser in New York, Pennsylvania and Ohio than in Ontario is patent to all, but it is not clear to all that this advantage of population to railways like the New York Central is entirely an advantage, at any rate not to the extent intimated by the Canadian railway officials. If it were, one would expect to find the New York Central paying a dividend many times larger than the Canadian Pacific Railway, the latter operating through some of the most sparsely populated regions of this country. The case of the Grand Trunk Railway is different to that of the Canadian Pacific Railway, because that company has a practical monopoly, such as few, if any, of the roads in the United States enjoy of the traffic, freight and passenger, of a most fertile and prolific section of the continent. It might be added that while the United States roads would all be expected to show handsome returns, returns related to the population of the states they serve, the Grand Trunk is itself, through its Michigan lines, a standing refutation of the "population and area" arguments subscribed to by its representative.

The argument opens up a whole field of suggestion, thought and research, which it will be impossible here to adequately exploit, but enough has been said to show that population is not everything in the making of railway earnings, though a monopoly of traffic may be, under efficient management, a very good way to assure satisfactory showings.

Does the statement of population and area above quoted correctly express the relationship between the Canadian provinces and the states mentioned? Inhabited or inhabitable area has surely some bearing upon the argument. It is true Ontario has 220,508 square miles and Michigan 57,430 square miles, and Wisconsin, the unit of measurement in the argument, 54,450 square miles. Of the area of Ontario, Mr. George Johnson, Statistician for the Dominion Government, says that leaving out Algoma, Nipissing, Muskoka, Parry Sound, and North Renfrew, with a combined area of 180,000 square miles, the populated portion of Ontario contains only 39,000 square miles and this against Michigan with its 57,430 square miles and Wisconsin with 54,450 square miles. What portions of Michigan and Wisconsin are in a backward state of settlement does not at present appear, but certainly these states are not possessed of thousands of square miles of area unvisited by either railway or railway man. From the standpoint of population, having regard to the abridged figures of area above quoted, Ontario stands favorably in a comparison with either Michigan or Wisconsin. The figures may be thus quoted with reference to the Grand Trunk Railway, which is the controlling factor, being the most widely interested in this debate.

	Area.	Population.
Ontario	39,000 sq. m.	2,024,316
Michigan	57,430 " "	2,420,982
Wisconsin	54,450 " "	2,069,042

It will be seen that the Grand Trunk are better circumstanced than the various or numerous railways competing for the traffic of Wisconsin. It has already been intimated that that company's Michigan rails do not make a satisfactory showing in the company's semi-annual statements.

It is not to be supposed that the Railway Commissioners will take, without inquiry, statements of this character as reason or argument for discriminating against any portion of the Canadian public, either manufacturer or shipper. It might appear from a casual glance at these and other arguments advanced by the Canadian railways, with probably a deep conviction of their reasonable application, that the ground for discrimination taken by Canadian roads is well and consistently taken and that regardless of markets and competition, the natural difficulties of which are otherwise sufficiently onerous for the Canadian millers, the railways are to justify and exact higher rates than they charge competing millers in the United States or allow the business to go past these Canadian millers, it may be to millers of the United States.

CORRESPONDENCE

Contributions are invited on subjects of general interest, but the Canadian Manufacturers' Association does not hold itself responsible for the opinions expressed by its correspondents.

COLONIAL MARKETS FOR BRITISH WOOLLENS.

Editor INDUSTRIAL CANADA:

Perhaps at the present moment, when the question of the industries in Canada which use wool as the foundation of their manufactures is being considered, a few figures compiled from the recent records of the Bradford (England) Board of Trade will be of interest.

It will be seen that the parts of the Empire outside Great Britain are gradually growing more valuable to the Brittanic manufacturers, and that foreign countries are more and more supplying their needs from their own factories. In wool growing, also, it will be seen that the domestic wool sheep are being displaced by importations of foreign wool.

So many phases have to be considered, it will hardly be possible in a short letter to give fully all the points, but by percentages and taking a fixed sum on which to figure, results can be better shown.

Factory help is better off, but with improved machinery turning out more yardage, the actual cost in manufacturing has been considerably reduced.

The average cost of raw wool imported and manufactured into fabric in Great Britain has fallen from 28½c. in 1870 to 19c. in 1902, while during the same period domestic wool fell from 40c. to 12½c. in the same period. During these years the average value of yardage fell from 82c to 56c. Had the yardage value fallen in the same proportion as the wool, a further difference of from 30 to 35% would be recorded.

Broad-goods, that is, 54 in. or wider, have increased in demand, being produced at a lesser proportionate cost, making a difference in the sales of narrow goods, 2,500,000 yards in 1890 falling off to 950,000 yards in 1902.

In the years 1870, 1871, 1872, $400,000,000 worth of fabric used 1,226 million pounds of wool, but in 1900, 1901, 1902, it took 1,406 million pounds of wool to produce $225,000,000 of fabric.

This will be better understood by taking a $5.00 worth of fabric in 1870, 1871, 1872, which called for fifteen pounds of wool; again, in 1879, 1880, 1881, eighteen pounds of wool; 1888, 1889, 1890, twenty-four pounds of wool; 1894, 1895, 1896, twenty-eight pounds of wool, and in 1900, 1901, 1902, thirty-one pounds of wool—that is, to $5.00 worth of fabric.

The Wilson tariff of the United States did not affect prices of wool, but under the Dingley tariff Britain's exports fell off $40,000,000. The McKinley tariff made a marked difference, as not only did exportation of fabric fall from $305,000,000 in 1890, to $260,000,000 in 1892, but the pounds of wool to $5.00 in fabric creased from 24 to 28, showing the fall in wool value.

Of the total value of exports from Great Britain, Canada's purchases increased from 4% in 1870 to 11% in 1902, and the total percentage purchased by countries under the Union Jack, i.e., Canada, Australia and South Africa, grew from 11% in 1870 to 35% in 1902. The United States' purchases of wool fabrics from Great Britain's total exports of these goods, fell from 21% in 1870 to 8% in 1902, and those of Germany, Holland, Belgium and France collectively fell from 45% in 1870 to 24% in 1902.

In 1870 Great Britain grew 141,000,000 pounds of wool, and imported 174,000,000 pounds, but in 1902, about 400,000,000 pounds were imported and only 98,000,000 home grown. In 1870 the value was about $95,000,000, and in 1902, about $75,000,000.

These figures show strongly that the Empire is the best customer for the manufactures of woollen fabrics of Great Britain.

In Canada there is no organization or body whose duty it is to compile figures showing the importations of wool or to gather statistics of such an important branch of our industries. In the United States the textile industries are on a par in value with the great steel and iron interests, and if they do not receive the attention in Canada from the Government or the public they should, may not some of the blame be on the textile manufacturers themselves for not having figures to show how important they are for Canada's success.

Yours truly,

James P. Murray.

Toronto, April 25, 1905.

JAPANESE DISCRIMINATION AGAINST CANADIAN GOODS.

Mr. C. T. Grantham, Manager of the Imperial Cotton Company, Hamilton, sends us the following letter from their New York selling agents, which may be found of interest as illustrating the difficulties which Canadian manufacturers are meeting with in endeavoring to market their goods in Japan:—

New York, April 22, 1905.

Dear Sir,—I regret having to report that in spite of continued efforts, we have found it impossible to sell any of the Canadian goods for export to Japan. During the past six or eight months we have sold very large blocks of goods manufactured in the United States for export to that market, but, in spite of our best efforts, and offers of price concessions, we have not been able to ship a yard of your goods to Japan.

Knowing that your goods were equal in every respect to the American-made duck, we were forced to look for some other reasons for the discrimination against the Canadian goods. We found, in the first place, that there was a preferential of five per cent. in favor of the duty on American duck. In order to offset that, we offered the Canadian goods at five per cent. less than the American goods, so that they might go in through the customs on the same basis. Even at this price concession, we were unable to effect any sales, in spite of the fact that the Japanese were most desirous of obtaining goods promptly, and were thoroughly scouring the American markets for goods which could be delivered at an early date. We then found out that the reason we could not effect sales was not so much on account of the prices of goods as because there was a sentimental prejudice in Japanese official circles against Canadian-made goods. It seems that the Japanese feel that they were discriminated against by the Canadian Government, and that the Canadian Government was not willing, at some time in the past, to make the same arrangements with Japan as was the United States and England.

I believe that it is more on account of this prejudice than for any other reason, that we cannot effect the sale of your goods in this market, and if it is in any way possible for you to bring about more friendly relations between your government and the Japanese officials, we believe that it will materially help the trade of the Dominion.

Yours very truly,

J. Spencer Turner Co.,

H. H. Lehman, Secy. and Treas.

SCIENTIFIC NOTES.

Fireless Cook Stoves.

To the practical German housewife must be given credit for one of the most recent innovations in the sphere of domestic economy. It consists of nothing less than a fireless cook stove, which, strange to say, can readily be manufactured out of an old trunk or packing case, some hay, waste paper or shavings, and a pillow.

The principle to which this interesting piece of kitchen furniture owes its origin is so simple that the wonder is the device did not come into general use long ago. It is a well-known fact that a pot of coffee can be kept hot for a considerable length of time without the aid of fire simply by wrapping it securely in a dry towel to hinder the escape of heat. In 1867 an attempt was made to utilize this principle in the cooking of food, by the introduction of a "Norwegian automatic kitchen." This was simply a wooden box, lined with felt and divided into compartments, and provided with plenty of packing material and a lid which could be securely fastened. In this box food which had been boiled for only a few minutes continued to cook slowly, and in two or three hours was found to be ready for the table. For some reason all efforts to introduce this novelty at that time proved unsuccessful, but it has recently been taken up again with much enthusiasm in certain parts of Germany, and is said to be meeting with general favor.

Any stoutly-made box, free from knot holes or cracks, will answer the purpose. This is loosely filled with hay, which should be renewed every two or three weeks. Before the pots are ready the requisite number of nests in the hay should be prepared, and when the pots are placed in these holes the hay should be packed under and around them tightly. A pillow is then placed over them and the lid of the box secured.

It is stated that almost any vegetable, if placed in this box after the water has been brought to a boil, will be cooked in from one to three hours, the retention of the heat maintaining a temperature nearly equal to boiling point. The box cannot be used of course for steaks or other articles whose attraction lies in the crispness resulting from rapid cooking over a hot fire, but it has been demonstrated that it can be successfully used for almost any article the preparation of which requires that it should be boiled.

Such a method of cooking possesses many advantages which the housewife cannot fail to appreciate, but so far as the head of the house is concerned, its chief merit will be found in the saving of coal which it is the means of effecting. In Germany they state that the cost of fuel can be reduced four-fifths, or even nine tenths.

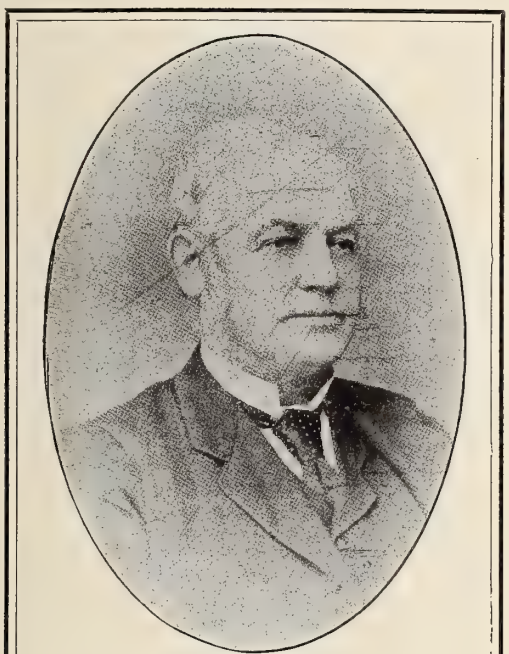
Reference Book.—Elsewhere in this number will be found a 2-page announcement of the International Mercantile Agency of Canada, Limited, with regard to the July issue of The Canadian Reference Book, which they publish. They give many good reasons why every manufacturer and merchant should have a copy of this very complete business reference book. The key to the ratings is also given, and seems to be most complete.

Among the Industries

THE MANUFACTURERS OF CANADA.

Sir John Carling, the subject of this month's sketch, is perhaps better known to the people of Canada as a statesman than as a manufacturer, yet his remarkable success as a man of business, and the enviable reputation enjoyed by the products of his celebrated brewery, entitle him to rank among the most prominent manufacturers of his country. For the following particulars regarding his public career, we are indebted to the *Farmer's Advocate.*

He was born in the Township of London, Middlesex County, on January 23rd, 1828. His father, a native of Yorkshire, was one of the pioneer settlers of that district, and saw the City of London spring from the forest wilderness and grow to be the commercial centre of Western Ontario. At eleven years of age, he moved with his father to the above city, where he received his early education. In 1849 he and his brother William succeeded



No. 13.
HON. SIR JOHN CARLING, K.C.M.G.

to the brewing business which their father had begun, and which under their careful management continued steadily to expand. After numerous additions had been built to the primitive establishment, the entire plant was replaced in 1875 by a handsome modern structure, which, unfortunately, was completely destroyed by fire four years later. Though somewhat crippled by the financial loss thus occasioned, Mr. Carling at once set about the work of reconstruction, and out of the ashes of the ruins there soon arose the present building, which is practically a duplicate of the one destroyed.

For some years the business has been conducted as a joint stock company, under the name of the Carling Brewing & Malting Co., Ltd., of which company Sir John Carling has always been president. Though now in his 78th year, he is still actively engaged in the management of the company's affairs, and takes a keen pleasure in showing visitors through his splendid establishment. Here one may see the brewing of lager beer, ale and porter, carried on under ideal conditions, and upon a scale which makes it little short of marvellous that the head of such an extensive business should have been able to devote so much time to the service of his country.

Sir John's public career has been so long and so varied that it is scarcely possible here to do more than mention a few of the more important positions which he has held. From school trustee to Senator, he has run almost the whole gamut of official life, giving to the work of each office his time and his care in unstinted measure. His first entry into the political arena was in 1857, when he was elected to the old Parliament of Canada, in which House he continued as a representative until Confederation. In 1862 he was appointed Receiver-General in the Macdonald-Cartier Government of Old Canada. At Confederation, dual representation being then in vogue, he accepted office as Commissioner of Agriculture and Public Works in the first Ontario Government, holding at the same time his seat in the Commons. In 1872 he resigned his seat in the Legislature, and two years later he was defeated in the Dominion elections by the late Col. Walker, though in 1878 he was again returned and continued to represent the City of London until 1896. In 1882 he was sworn in as Postmaster-General, which portfolio he held till 1885, when he became Minister of Agriculture. In 1893 he was created K.C.M.G., and in 1896 he was called to the Senate, where he is still to be found in faithful attendance.

A resolution adopted by the Committee of the House of Commons on Agriculture and Colonization in March, 1893, expresses that body's appreciation of the services rendered by Sir John Carling to the agricultural interests of the Dominion. It recognizes the immense value to the country of the splendid system of experimental farms for which he laid the foundation, and gives him credit for what he did towards the promotion of the cattle trade, the establishment of a quarantine system, and the advancement of dairy interests generally. It only remains to be added that he has always been a staunch friend to the city of his adoption, with whose material progress he has been prominently identified.

Miller & Richard, the well-known type founders, have opened a branch at 123 Princess Street, Winnipeg.

The Eureka Planter Co. will move from Windsor to Woodstock, Ont., where work on their new factory has already been begun.

The Cyclone Woven Wire Fence Co., of Toronto, will remove to Woodstock, Ont., where they have been given a free site by the municipality.

The Colonial Ink Co., of Peterboro', has secured a location in Hamilton, and will move its works to the Ambitious City about the middle of May.

The Wilkinson Plough Co., Ltd., Toronto, have secured control of the West Lorne Wagon Co., and now have a very complete line of wagons and sleighs to offer the implement trade.

The City of Windsor has decided to build an entirely new and modern lighting plant, and as soon as it is completed application will be made for legislation permitting the city to engage in commercial lighting.

The Murphy Iron Works, who recently established a branch in Canada, are at work upon a contract for the equipment of the 2,300 h.p. water tube boilers for the Laurentide Paper Co., Grand Mere, P.Q., with Murphy automatic smokeless furnaces. This will be the first equipment of Murphy furnaces manufactured on the Canadian side.

The Cataract Wine and Canning Co., of Niagara Falls, expect to begin work immediately on a $35,000 factory, which is to be completed by August 1.

The Manitoba Iron Works, Winnipeg, are extending their forge shop to double its present size, to provide space for heavy bolt forging and threading machines.

The Wallaceburg Sugar Co. are trying the experiment of importing Trinidad raw sugar for refining purposes, to see if it be not possible to keep their mill in operation during the season when sugar beets are not obtainable.

Mr. D. W. Robb, of the Robb Engineering Co., has completed arrangements for the establishment of a branch factory at South Framingham, Mass. The business will be conducted under the name of The Robb Mumford Boiler Co.

Within the past year Mr. George A. Slater, Montreal, has doubled the capacity of his manufacturing department, principally with a view to taking on business in Europe and Australia. He has recently opened agencies in Antwerp, Brussels and Paris.

Letters of incorporation have been granted to W. H. Clark & Co., Limited, who have taken over the business of W. H. Clark & Co., sash and door manufacturers and lumber merchants, Edmonton, Alta. The provisional directors are W. H. Clark, A. W. Robson and C. G. Robson, and the authorized capital is $100,000.

R. and T. Richie, of Aylmer, Que., have purchased 165 square miles of good timber land on the Mattawa from the Hull Lumber Co. It is estimated that these limits contain over 150 million feet of lumber, one-third of which is pine. The logs will be taken to Aylmer and cut at the mill there.

In order that they may be in a position to supply the special kind of steel required by the Canada Car Co., the Montreal Steel Co. will add another department to their plant. Additional common stock to the amount of $30,000 will be issued to cover the cost of the contemplated improvements.

L. S. Higgins & Co., of Moncton, have purchased the Redding shoe factory at Yarmouth. The firm has also purchased the Redding tannery at Hebron, and may acquire the buildings later. Mr. Higgins states that he will soon have the factory in operation, and that he will employ a large number of hands.

The ratepayers of Brockville have voted a loan of $30,000 to the Canada Carriage Co., whose factory was destroyed by fire early in the year. They have also voted $1,000 to purchase a site for the D. H. Burrell Co., of Little Falls, N.Y., who will manufacture all kinds of dairy supplies.

Work is being actively pushed on the erection of the new Canadian mint at Ottawa. The walls are being built of Nepean sandstone, while the granite to be used will come from Stanstead, Que. If the machinery can be installed with reasonable promptness, the Government will be able to start coining gold in about two years.

The firm of P. Burns & Company, butchers and cattle dealers, are preparing plans for a large abattoir, which is to be put up as soon as possible at Vancouver. It will be built upon a scale large enough to handle all the meat required for consumption in that city for many years to come. Its cost is estimated at $150,000.

Sydney (C.B.) fishermen are looking forward to a busy season. The enforcement of the Newfoundland Bait Act against United States fishing vessels promises to be a good thing for them, and as the French fleet from St. Pierre will also have to look to Cape Breton for its supplies, it is thought that high prices will prevail.

During the past two months the Thomas Organ and Piano Co., Woodstock, has made large shipments of organs to Germany and Holland, as well as several consignments to New Zealand and England. Catalogues of Thomas organs are now being issued in English, French and German, and correspondence is solicited in any of these languages.

The Elk Lumber and Manufacturing Co. have projected a new mill at Fernie, B.C. It is to employ 240 men and have a capacity of 100,000 feet per shift of 10 hours. The plant will cost in the neighborhood of $100,000.

The Lake of the Woods Milling Co. have decided to put up a 4,000-barrel flour mill at Montreal, and a 5,000-barrel mill at Winnipeg. The present capacity of their mills at Keewatin and Portage la Prairie is 5,000 barrels, so that with this new equipment they should become one of the most important milling concerns in the world.

The Northern Elevator Co. have secured a site and will soon commence work on a 3,000-barrel flour mill in Winnipeg. The elevator which will supply the mill will have a capacity of 250,000 bushels. Later on it is thought that an oatmeal mill will be added to the plant. The erection of the flour mill and elevator will involve an expenditure of $250,000.

Charles F. Dawson, mercantile and manufacturing stationer, Montreal, has just moved into a large and splendidly equipped store and warehouse at 1813 and 1815 Notre Dame Street. This business has been in existence for nearly ninety years, all of that time situated on St. James Street. The new premises comprise five floors, beautifully furnished throughout.

The Munro Wire Works, Ltd., are opening out in Winnipeg, and have secured a valuable location. They are at present installing machinery, and expect to be in operation in a short time. They control some valuable patents which will greatly assist them in the prosecution of their work. Mr. James Munro is now in Winnipeg superintending the completion of the plant.

The large pulp and paper mills projected at Grand Falls, N.B., now seem to be assured, the promoters having placed a deposit of $50,000 with the provincial government. This sum is to be returned with interest if at the end of five years the company have expended $3,000,000. It is reported that the mills will be the largest of the kind in the world, with a daily capacity of 600 tons.

The Toronto Pressed Steel Co., Toronto, has completed its buildings, and the machinery is now nearly all set up. In a few weeks they expect to be in the market with every kind of railroad and contractors' supplies. The steam press built specially for this company is the largest in America, and is capable of turning out scrapers at a rate sufficient to meet the strongest demands.

Work will be commenced this summer on the largest steel span bridge in the world, which is to be erected over the St. Lawrence River at Quebec. Its estimated cost is $3,800,000. It will be 2,800 feet long between centres of anchorage piers, and its superstructure will weigh 40,000 tons. The large cantilever span over the channel of the river will measure 1,800 feet. It is expected that the bridge will be open for traffic early in 1909.

Fruit growers in the Niagara district have organized a distributors' company, the object of which is to bring about a more equitable distribution of fruit throughout the Dominion. Losses have occurred in the past through shipping to over-stocked markets, but now it is the intention to keep all growers constantly in touch with the situation at various points. Mr. Mulholland, formerly of Husband Bros. & Co., Toronto, will be managing director of the company, which is capitalized at $1,000,000.

According to the Canadian Machinist, Lymburner & Mathews, engineers, Montreal, are building a new three-storey brick workshop at the foot of Berri Street in that city. The top storey will be devoted to the brass foundry and die making, the second to the brass finishing department, the plating and oxidizing department, and the pattern shop, and the ground floor will be used for offices, store rooms, and machine and blacksmith shops. The building was ready for occupation at the end of April. The firm will devote themselves largely to marine repairs and job work, and expect to employ 80 to 100 hands.

Foreign Trade News

This Department is published in connection with the work of The Commercial Intelligence Committee, who will be glad to receive from reliable sources contributions relating in any way to Export Trade.

Brewing and Distilling in Japan.

Distilling, as understood in Canada, is practically unknown in Japan. The only distilled liquor produced in that country is what is called "shochu," which is distilled from rice, just as the natural beverage "sake" is brewed from the same material. The production of "shochu" for 1902 amounted to 5,161,000 gallons, but it is rather difficult to ascertain the number of the distillers, as the liquor is generally manufactured by the "sake" brewers as a side line. The distilling is conducted in the old-fashioned style. No distillery of foreign spirits, such as whisky and brandy, has yet been started in Japan. In recent years the manufacture of spurious foreign spirits by the mixture of alcohol has prevailed, but owing to the imposition of a heavy import duty on alcohol the business has undergone a check.

In 1902 there were fifteen small manufactories of alcohol, the total output amounting to only 5,888 gallons. With regard to "sake" brewers, there are more than 20,000 in the country, and the consumption of "sake," from which the government derives a large revenue, does not suffer diminution despite the gradual increase of tax. The output of "sake" in 1902 was 160,433,258 gallons.

Until about fifteen years ago, there were only one or two beer breweries in Japan, but in 1902 the number had increased to seven, with an aggregate paid-up capital of $2,182,000. The output of beer in 1902 totalled 3,614,526 gallons. The rapidity with which the consumption of beer has increased among the Japanese is really remarkable. At first all the breweries were getting their supplies of malt from abroad, but at present several breweries are making malt from Japanese barley.

For the year 1903 the imports of wines were valued at $236,569; spirits, $384,618; malt, $135,615; hops, $57,342.—*Canadian Commercial Agent, Yokohama.*

Tin Production of the World.

According to recent German returns, the tin production of the world amounted to 93,093 tons in 1903, an increase over the preceding year of 2,916 tons. According to these returns 75 per cent. of all tin comes from south-eastern Asia, the following being the estimated output of the several colonies and countries: Malacca, 54,797 tons; Banca and Billiton, 20,060 tons; Bolivia, 9,500 tons; Australia, 4,191 tons; Cornwall, 4,150 tons; all other places, 395 tons.

Although the production of tin has increased regularly from year to year, the output is not sufficient to supply the demand, as the stock on hand in the most important tin markets has constantly decreased. The United States consumes 43 per cent. of the total tin production; Great Britain, 28 per cent.; the other European countries, 22 per cent., and India and China together, 7 per cent.—*International Bureau of American Republics.*

The Banana Industry of Costa Rica.

The banana industry, unknown to Costa Rica twenty-five years ago, has reached such proportions, especially within the last few years, that bananas now form the main export of the country. It is no longer an infant industry, but a giant one, as important as that of coffee, which for a long time has been the mainstay of this small but stable Republic. At the close of 1904 about 50,000 acres of land were devoted to banana growing in Costa Rica, of which 90 per cent. is owned by the United Fruit Company, a United States corporation which controls probably 75 per cent. of the total production.

At present the market for this fruit is highly encouraging and bids fair to continue so for many years to come. Exports have more than doubled during the last five years, and the indications are that they will double again during the next five years. Up to 1902 trade was confined almost exclusively to the United States. In that year shipments were made to England with gratifying results, and as soon as the acreage has been increased, and adequate cold storage facilities have been provided on trans-Atlantic vessels, it is the intention of the planters to introduce the banana into France, Germany, Italy and Spain, where as yet it is not consumed.

For the year ending June 30, 1904, the exports from Port Limon totalled 5,760,000 bunches.—*U.S. Consular Report.*

Swedish Coal and Ore Trade.

There is every probability that the coal and ore trade between Sydney, C.B., and Sweden will be continued. A small beginning was made last year, when one of the boats of the Johnson line brought out a consignment of ore for the Dominion Iron and Steel Co., taking back with her a full cargo of Cape Breton coal. The results, so far as the Dominion Iron and Steel Co. are concerned, are known to have been satisfactory, and as the Canadian coal met with a ready sale in Sweden, it is stated that the Johnson line are prepared to devote one of their boats exclusively to this trade for 1905.

Canning Factories for China.

There is to be an opening for modern canning factory machinery and appliances in China before long; indeed, it may almost be said that there is an opening at the present time. The new industrial school being established in Hangchow by the gentry of this province includes in its curriculum training in the canning of fruits and vegetables on a large scale.

There are reasons why factories of the sort are likely to succeed. While there are not many fruits in China which can be canned to advantage, there are one or two varieties which can be put up for some classes of trade for far less money here than in other countries. The fruit is cheap, and labor can be had at rates impossible anywhere else than in Asia.

In this part of China it is probable that some vegetables could be handled by canning factories with good returns, the low price of the vegetables and of labor offering advantages which would enable the projectors to enter markets now held by other nations. The Chinese themselves appreciate the possibilities in this direction, and the proposed school course in Hangchow is significant. —*U.S. Consul, Hangchow.*

Consumption of Wool in Great Britain.

In a recent consular report from Nottingham, England, it is stated that the figures of an expert statistician there show that there has been a great shrinkage in the consumption of wool in Great Britain. The average per capita since 1890 was given as follows: 1890 to 1894, 16.35 pounds; 1895 to 1899, 17.13 pounds; 1900 to 1904, 15.73 pounds. The alleged cause is disastrous droughts in Australia greatly increasing the price of wool. While the consumption declined from 524,600,000 pounds in 1900 to 466,900,000 in 1904, the estimated consumption of shoddy increased from 130,000,000 pounds in 1900 to 180,000,000 in 1904. The consumption of home-grown wool has steadily declined year by year,

with only two breaks since 1870, when it amounted to 150,400,000 pounds; in 1904 it was only 94,100,000 pounds. The consumption of foreign wool increased year by year in the same period, with only one break, from 191,200,000 pounds in 1870 to 423,400,000 in 1901. Since then it has steadily declined. It is predicted that there will be an even greater consumption of shoddy and inevitably less consumption of wool in 1905 than in 1904.

Australian Sugar Production.

According to *The British Trade Journal*, there are immense areas in Queensland and in the northern portions of New South Wales where every description of semi-tropical crops can be grown, including cotton, tobacco and sugar. The cultivation of the latter along systematic lines has rapidly developed or late years, the extensive employment of imported colored labor greatly facilitating in the work. At first operations were conducted in a primitive fashion, each sugar-grower having his own crushing mill. In this way considerable loss was occasioned by the waste of juice. Now the majority of growers sell their cane direct to the Colonial Sugar Refining Company, which has large and well equipped sugar mills at various points in the north. In Queensland the State Government advances money on mortgage for the construction of sugar mills on the co-operative principle. Already some fifteen of these establishments have been erected, costing from $100,000 to $300,000, according to size and capacity. They are fitted with the best machinery, and managed by experienced men.

At the present rate of consumption, Australia requires 179,000 tons of sugar every year. The average annual production is estimated at 142,400 tons, necessitating the further production or importation of 36,600 tons. There is a duty of £6 per ton on sugar imported into the Commonwealth, the excise duty being fixed at £3, but a bounty of £2 per ton is allowed on all Australian sugar grown by white labor. In New South Wales 85 per cent. of the sugar is grown by white labor, showing a disposition to profit by the inducements held out by the Government. Under the circumstances a gradual increase in the production may be looked for, and it is possible that before many years there may be a new com competitor in the European markets with West Indian, Java and other cane sugars.

Christchurch International Exhibition.

An international exhibition of considerable importance is to be held in Christchurch, New Zealand, from December, 1906, to April, 1907. While originally a project of the city authorities, it will receive assistance from the Government. The site selected is Hagley Park, Christchurch, said to be the finest park in New Zealand, and capable of accommodating a show three times as big as that of St. Louis. The fact that New Zealand imports the greater part of its requirements in the way of manufactured goods, is likely to attract a large representation from abroad, especially as the management have decided to make no charge for space in the case of oversea exhibits. It is expected that the shipping companies will issue a special tariff of reduced rates on goods intended for display, and as Christchurch is only seven miles distant from Port Lyttelton, there will be little expense in the matter of inland freights.

West Indian Trade.

According to the *Montreal Star*, shipping men of that city are of the opinion that a monthly service between Canada and Cuba, as is proposed, would hardly meet requirements. They believe that if Canada is to take hold of the question in earnest and develop trade with the West India Islands up to its proper standard, the vessels must not only be as good as those now operating between the United States and West Indian ports, but also that the service must be frequent.

The amount of goods consumed by the West Indies in the course of a year is surprisingly large, and this trade is now virtually all centred in the United States, where it has been carefully fostered for years. For instance, the monthly imports of flour into Demerara alone for the past four years have averaged 15,000 barrels, while in Trinidad the figures run over 20,000 barrels. In 1900 Demerara bought 7,000,000 feet of lumber, 90,000 bushels of oats, 33,000 bushels of peas, 9,800 tubs of butter, and 5,593 boxes of cheese.

If an adequate Canadian service were provided, Canadian ports would handle the 15,000 bales of tobacco and the 1,000,000 bunches of bananas which we buy every year from Cuba, and which now reach us by way of United States ports. Last year, after the close of St. Lawrence navigation, it is stated that 45,000 tons of sugar were received into Canada, every pound of which came via United States ports. Many other commodities, such as molasses and coffee, and general cargo, which might be picked up at ports of call, would help to swell the traffic into one of considerable volume. So that there is every reason to believe that the service which Montreal shippers are advocating would prove a profitable one.

Trade Openings in Mexico.

Discussing the openings for British trade in Mexico, Mr. Biorklund, clerk to His Majesty's Legation, writes as follows in the Foreign Office Reports for April, 1905:—

"With the development of the country, the opening up of new districts, both agricultural and mining, the building of the port works and other public works, the construction of railways, the sanitation of many of the large towns of the Republic, the starting of new industries, etc., an ample field is open for all kinds of articles which in former years were never even thought of for this market. Electricity, too, a power which under the present conditions seems destined to take the place of steam and water, supplies motive power in districts which last century were still considered to be too far from any centre to be of any importance either for commercial or industrial purposes. This furnishes a sufficient proof that commerce in general is in a more flourishing condition than formerly; and foreign capital has found its way into the country in almost every branch of industry. The Americans have taken advantage of this in a very great measure, and American enterprises are found in almost every State of the Republic, and in many places are very prosperous. The Germans also are rapidly increasing their commercial interests in this country, many of the large breweries being controlled by German capitalists; the hardware trade, both wholesale and retail, is in their hands; but the iron smelters and refineries are not German companies. Agricultural companies have been formed in many of the large cities in the United States for operation in Mexico, as also mining companies; but British influence is felt in a very small measure as compared with the former."

Iron and Cement Trade of Germany.

The iron trade of Germany for 1904 was decidedly disappointing, according to H. M. Consul Schwabach, Berlin. The condition of the pig iron industry has come to be largely a question of exports. The requirements of the home market are comparatively stable. They are slowly increasing since the collapse of 1901, but have not approached the record of 1900. The reduced consumption placed before the pig iron works the alternative of either reducing their output by a third or even more, or forcing the exports by sacrificing profits. They chose the latter course, with the result that the exports of iron and manufactures of iron rose from 1,509,887 tons in 1899 to 3,481,224 tons in 1903. These sales were effected at prices which left very small or no profit at all to the works, and were immediately followed by a cry against German "dumping" in the United Kingdom and elsewhere. The adoption of similar tactics by United States manufacturers so encroached upon this export trade that the German Steel Works Syndicate decided in April, 1904, to discontinue the practice of dumping, much to the prejudice of those iron works that relied on the export business for a very large part of their production.

The cement industry is said to have recovered to some extent from the depression which prevailed, owing to overproduction, during 1901, 1902, 1903. Efforts made to form a general syndicate proved unsuccessful, but the organization of local syndicates in different parts of the country aided very materially in improving the situation.

TRADE ENQUIRIES

343 **AGENCIES—Glasgow**—A correspondent in charge of a Glasgow Branch of a wholesale London house has time at his disposal to introduce Canadian goods, and desires to communicate with manufacturers wishing to appoint an agent. References are offered.

344 **Lille**—A correspondent who is a graduate of a French technical school is about to open business on his own account and is desirous of representing Canadian firms in France. His headquarters will be at Lille.

345 A middle-aged man in **Glasgow** who has a successful business career and can produce the best of references, offers his services to a Canadian firm or firms desiring representation in England.

346 A **London**, England, firm, operating largely in South American markets, that has a branch in Buenos Ayres and is opening houses in Chili, Brazil and Mexico, desires to communicate with Canadian shippers willing to cater for South African trade. References are forwarded.

347 **Madrid**—A company recently incorporated in Madrid, Spain, carrying on the business of importers and dealers in British and American manufactured goods, solicits correspondence from Canadians wishing to develop trade with Spain.

348 **Sydney**—A correspondent in Sydney, N.S.W., who has introduced successfully a number of lines of goods manufactured by United States firms, desires to turn his attention to Canadian shippers, and is prepared to accept agencies for any goods that can compete in Sydney. This correspondent is at present in Canada, and wishes to make connections while here.

349 **West Indies**—A correspondent who for some years has been representing some of the best Canadian export manufacturers in the West Indies and British Guiana is prepared to undertake further agencies. He has recently increased his travelling staff, and reports business in the West Indies much brighter than for some time past.

350 **Agricultural Implements**—A commission merchant in **Hamburg, Germany,** importing American machines, hardware, etc., desires to secure the Canadian agency of a manufacturer of agricultural implements. This correspondent is well known to some Canadian shippers.

351 **Apples**—A firm in London importing large quantities of fruit and vegetables, desires to make business connections with Canadian shippers of apples. References are forwarded.

352 **Apples**—A Copenhagen firm desires to get into direct business connection with reliable Canadian packers of fresh apples in barrels for export.

353 **Automobiles, Motor Cycles, Billiard Tables, Wood-Working Machinery, Musical Instruments, Paints, Varnishes, Paint Brushes, etc.**—A correspondent carrying on a wholesale business in Tanjore, South India, desires to purchase the above in quantities. He asks for quotations f.o.b. Port of Madras, and will pay cash on delivery. References will be forwarded on request.

354 **Boards, Piano Key**—A manufacturers' agent in London, England, doing a large business in the above, desires to purchase same in Canada. They are wanted 4 feet long by 14 inches, 15 inches, 16 inches and 18 inches wide. Sample has been forwarded.

355 **Cereals, Canned Fruits, Vegetables, etc.**—A young Canadian, resident for some time in the Southern States is about to open up manufacturers' agency business in Mexico, and desires to communicate with Canadian shippers of the above and other lines of goods who wish their produce introduced in that market.

356 **Cheese, Butter, Eggs, Bacon, etc.**—A London, England, provision merchant has asked to be placed in communication with Canadian firms exporting the above.

357 **Doors, Metallic Ceilings and Articles for Building Trade**—A general wholesale and commission agent in Berlin, Germany, desires to purchase the above articles 3%, 30 days c.i.f., Hamburg. A number of references are forwarded.

358 **Flour and Apples**—A Copenhagen correspondent asks to be put in touch with millers of wheat flour and shippers of green apples in barrels.

359 **Furniture, Bedroom Chairs, Roll Top Desks, Telescope Tables**—Glasgow House desires to procure the agency for the lines mentioned above.

360 **Ham and Bacon, Cheese, Flour, Feed, Pease and Beans**—Enquiry is received from a general importer and commission agent in Jersey, England, who has been carrying on a wholesale business since 1891. He asks for quotations on the above goods delivered in Jersey.

361 **Joinery, Wheelbarrows, Skewers, Roofing Slate, etc.**—A firm of manufacturers' agents in England in a position to push the sale of the above articles are desirous of representing Canadian houses.

362 **Machinery, Skewers, etc.**—A Canadian firm desires to purchase machines for manufacturing waste pieces of hardwood into tooth picks, skewers, etc.

363 **Machinery, Match Making**—A correspondent in Liscard, England, asks for quotations and prices on all classes of match making machinery. He wishes everything necessary for the equipment of a small plant.

364 **Merchandise, General**—A firm in London, England, who are interested largely in trade in the Argentine Republic, are desirous of negotiating with Canadian manufacturers or shippers in a position to cater for that market.

365 **Merchandise, General**—A Glasgow, Scotland, firm asks for quotations on any surplus stock that manufacturers may have to dispose of in Great Britain. Cash payment will be made for any goods purchased.

366 **Paints and Painters' Supplies, Coach and Railway Varnishes, etc., Colors, Tar, Lanterns**—A wholesale dealer and general importer in Mayaveram, India, asks for catalogues and price lists of the above articles.

367 **Paper, News**—A firm in Bradford, England, having a large connection among buyers of paper desires to secure the agency for newspaper in reels or reams.

368 **Patent Rights**—A Glasgow, Scotland, house is at present in need of a Canadian agent or firm to negotiate for the sale of Canadian patent rights.

369 **Produce**—A firm that is recommended to us and well spoken of in London desires to communicate with shippers of produce with the end in view of establishing business relations. References are forwarded.

370 **Produce**—A cold storage company in the North of England is seeking to establish business relations with Canadian exporters of produce.

371 **Tar, Coal**—A New York export commission house makes enquiries for Canadian exporters of coal tar.

372 **Wheat, Cheese, Flour and Produce**—A firm of wholesale merchants established in **Belfast, Ireland**, in 1883, desires to purchase the above and other articles in the same line in Canada. They forward references and are willing to arrange payment on terms that will be satisfactory.

Wanted.

Superintendent for large machinery plant in the Province of Ontario. Energetic, experienced man required. Address enquiries to Secretary, Canadian Manufacturers' Association, Toronto.

CHEMICAL INDUSTRIES OF THE DOMINION.

(*Continued from page* 616).

tinue to improve and to develop even more than they have done in the past decade. Canada, with its immense natural resources, and its water power should, in time and with proper management and assistance in the lines indicated, become one of the largest producers of the world's supplies.

In conclusion, I wish to acknowledge the great assistance I received, in preparing the previous edition of this paper, from Mr. Fred. P. Clappison, B.A., then Fellow in Political Science in the University of Toronto, who gathered together for me from all quarters much of the information required for this short and imperfect account of the chemical industries of the Dominion. In particular his help in connection with the statistics contained in the text and in the appendices was invaluable. Much of what appeared before has been repeated, though many alterations, omissions and additions have been necessary. To the gentlemen who so kindly answered enquiries as to their particular industries and placed valuable material at my disposal, I desire also to convey my hearty thanks.

THE END.

TRADE PUBLICATIONS.

Ready-Made Houses.—The house problem, one of the most serious, perhaps, that the western settler has to confront, is in a fair way to be solved through the placing upon the market of ready-made houses. The British Columbia Mills Timber & Trading Company, of Vancouver, have gone into this business upon a large scale, and their first catalogue, a copy of which we acknowledge, comes to us almost as a revelation. The structures which they illustrate are of the permanent rather than the portable variety, yet they can be shipped in easily-handled parts, put together with a minimum amount of time and labor, and when completed afford a thoroughly waterproof, convenient, inexpensive and handsome dwelling.

Sawmill Machinery.—"Setting Machines for Sawmills" is the subject of an interesting booklet by the William Hamilton Manufacturing Company, Ltd., of Peterborough, Ontario. The mechanism of these wonderful devices, which are the admiration of every visitor to a modern sawmill, is set forth in detail, special emphasis of course being laid upon the advantages of machines of the Hamilton make.

Wire Fencing.—By the liberal use of half-tone illustrations showing farm life at its best, the Frost Wire Fence Co., Ltd., have imparted a most attractive appearance to their 1905 catalogue. The advertising feature in each of these illustrations has been brought out prominently by retouching the photographs, so that the fences stand out perfectly white. A large variety of styles are shown, including both plain and ornamental, together with information as to the accessories needed for setting the fences up.

THE "RUSSELL"



This "MADE IN CANADA" Car is a big success. It has power, good lines, is luxurious in finish and appointments, but best of all it can stand the rack and wear of Canadian Roads. It's a Car built particularly for Canadian Roads—The "Russell."

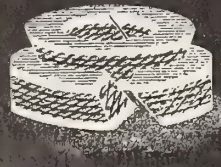
SPECIFICATIONS: 12 to 14 horsepower, double cylinder opposed engine—situated under the bonnet in front, driving through a slide gear transmission with three speeds forward and one reverse. Bevel gear drive direct to rear axle. 90 inch wheel base. Wheels 30 x 3½ inches. Gasoline capacity for two hundred miles. Body of handsome design, with side entrance tonneau, which is also easily detachable, so as to be used for runabout purposes. Color—Ultramarine blue body with light running gear.

EQUIPMENT: Two oil lamps, tail lamp, horn, and ten thousand mile odometer. **Price, $1,500.**

WRITE FOR CATALOGUE—

Canada Cycle and Motor Co., Limited

AUTOMOBILE CORNER (Bay and Temperance Streets) - - TORONTO.



ENGINE PACKINGS. We carry a large stock of all the STANDARD PACKINGS.

COLD WATER SWEATING PIPES are remedied by our SPECIAL COVERING.

EUREKA MINERAL WOOL & ASBESTOS CO.

Montreal Branch: 389 St. James Street. 74 York Street, TORONTO.

STEEL BUILDINGS



We are prepared to design and erect STRUCTURAL STEEL WORK OF ALL DESCRIPTIONS, including STEEL BUILDINGS, BRIDGES, JIB and TRAVELLING CRANES, SMOKE STACKS, STAND PIPES, WATER TANKS and RIVETED STEEL PLATE WORK.

CANADA FOUNDRY CO., LIMITED

Head Office and Works: TORONTO, ONT.

DISTRICT OFFICES:

MONTREAL HALIFAX OTTAWA WINNIPEG CALGARY VANCOUVER ROSSLAND

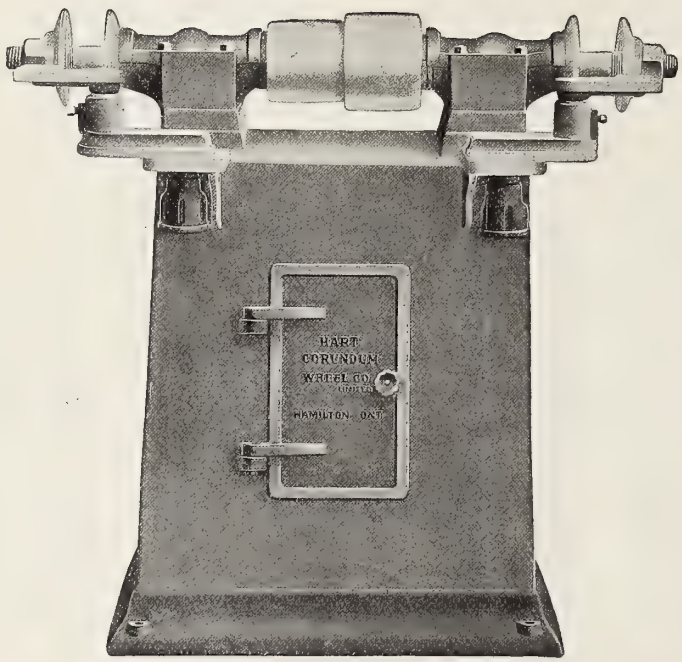
HART CORUNDUM WHEEL CO.,

LIMITED

HAMILTON - CANADA



THE OLD RELIABLE



CYCLONE GRINDER No. 17

Cyclone Grinder No. 17

Buiit on Scientific Principles, Bearings absolutely DUST PROOF, Automatic Oilers, to carry 2 wheels 12 to 16 in. diameter, 3 in. thick.

Length of crucible steel arbor	42 inches
Distance between wheels	30 "
Diameter of arbor between collars	1½ "
Size of bearings	8 x 1-9/16 "
Size of cone pulley on arbor	5 and 6 x 4½ "
Diameter of collars	6 "
Height from floor to centre of arbor	35 "
Size of base	23 x 27 "

Countershaft has cone pulleys 15 x 16 x 4½ inches face.

Tight and loose pulley, 8 in. diameter, 5 in. face, and should run about 650 revs. per minute.

Our Pure Crystal Corundum Saw Gummers have no equal for their Rapid, Cool, Cutting Properties.

Read the following from Bulletin 180 of the United States Geological Survey:

"Often a distinction is made between emery and corundum, many persons not recognizing emery as a variety of corundum. Emery is a mechanical admixture of corundum and magnetite or hematite. It is, of course, the presence of corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain."

Emery is imported, mined by Greeks and Turks, and contains only about 25 per cent. corundum. Our Crystal Corundum is guaranteed to be 98 per cent. pure alumina, a Canadian product, mined and manufactured by Canadians for Canadians.

Write for Catalogue. **Prices on application.**



CANADIAN PARLIAMENT BUILDINGS, OTTAWA, CANADA.
FIREPROOFED WITH "HAYES" PATENT METALLIC LATHING AND PRESSED METAL DOORS.

BETTER GALVANIZING

Contractors and other large consumers of Galvanized Sheet Metal should investigate our elaborate line of Art Metal work.

By a new process a grade of Galvanizing is produced hitherto unequalled. Not only is every edge and cutting thoroughly zinc covered by individual dipping, but, by the almost chemically pure zinc used and a peculiar knack in its application, an *absolute alloy* of zinc and iron is formed on the surface of all our Galvanized Roofing, Shingles, etc.

In ordinary galvanizing the zinc merely forms a coating on the surface, a coating that any undue bending is liable to crack and cause an electrolytic action to ensue in the presence of moisture. The zinc plates turned out by our factory can be bent back and forth many times at sharp angles without exposing the coated iron or steel in the slightest crack or seam. Such galvanizing lasts and wears and satisfies.

Don't fall into the impolitic error of thinking it to a builder's or contractor's interest that a piece of galvanizing wear "NOT TOO LONG." The reputation gained and new work secured by the use of high-class Metal that wears the way ours does, outweighs any advantage that comes from renewing poorly done work.

We make every kind of Architectural Sheet Metal Work, and desire the trade that gives QUALITY first consideration, and understands its relation to price.

OUR NEW
$10,000
CATALOGUE

We have just issued the most elaborate, complete and comprehensive Catalogue ever offered to the Metal Trade. It is a veritable encyclopedia of all that's practical and beautiful in art manipulation of Sheet Metal. Book contains 440 pages, superbly bound and illustrated. We send it free, upon request from any builder, contractor or dealer of responsibility.

PARTIAL LIST OF GOODS MADE BY

METALLIC ROOFING COMPANY

Metallic Shingles
Metallic Tiles
Metallic Siding
Metallic Clapboards
Metallic Awnings
Metallic Interior (Art Finish)
Metallic Ceilings
Metallic Ventilating—Ceiling Centres
Metallic Cornices
Metallic Wall Designs
Metallic Pressed Ornaments and Enrichments
Metallic Capitals
Galvanized Eavetroughs
Galvanized Conductor Pipe
Metallic Skylights
Metallic Ventilators
Metallic Lathing—"Hayes" Patent
Metallic Fireproof Doors and Shutters
Metallic Fronts for Stores and Buildings, old or new
Metallic Fireproof Windows (Wired Glass)
Metallic Window Frames
Metallic Doors and Window Caps
Metallic Sills (for Cupolas, etc.)

THE METALLIC ROOFING CO., OF CANADA, LIMITED

MANUFACTURERS - CONTRACTORS - EXPORTERS - - - - TORONTO, CANADA.

Established 20 years. *Cable Address: "Metallic," Toronto. A. B. C. and Private Codes.*

Strict compliance is always given to the peculiar and specific shipping and packing requirements of foreign buyers.

Export Orders Filled with Despatch

DRY COLORS

Cable Address "Pure" Western Union Code

WE ARE NOW IN A POSITION TO FILL ORDERS FOR OUR MINERAL AND VEGETABLE PIGMENTS AND DRY COLORS, ALSO FLEXIBLE PASTE COLORS PRODUCED BY OUR PATENT PROCESS.

WE GUARANTEE THESE COLORS TO HAVE A PERMANENCY AND DURABILITY FAR SUPERIOR TO ANYTHING HERETOFORE MADE.

SAMPLES AND QUOTATIONS CHEERFULLY FURNISHED.

PURE COLOR COMPANY, LIMITED.

OFFICE AND WORKS

HAMILTON . - - - CANADA

Headquarters for Greases

Cable Address "Campbell"

We manufacture greases of all descriptions for every known purpose



Cup and Motor Greases
Hot and Cold Neck Grease
Journal and Roller Greases
Harness Oil
Harness Oil Blacking
Harness Soaps

Leather preservers and belt dressings.

The above goods are put up in attractive lithographed packages.

The Campbell Mfg. Co., Limited

Hamilton, Canada

DODGE

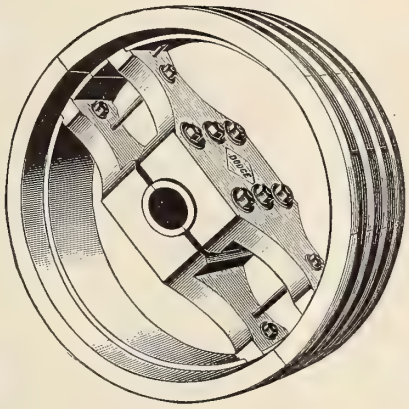
STANDARD WOOD SPLIT PULLEYS

With Standardized Interchangeable Bushing System.

In perfect Balance

Finished Waterproof

Position Compression



"Recognized the world over as the 'BEST' in Wood Pulleys."

OUTPUT AND SALES EXCEED THAT OF ALL OTHERS COMBINED.

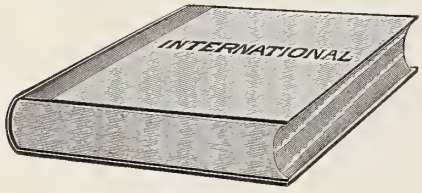
CARRIED IN STOCK BY THE PRINCIPAL HOUSES IN EACH IMPORTANT CENTRE.

SOLE MANUFACTURERS—

DODGE MANUFACTURING CO.

TORONTO - - - ONT.

MONTREAL BRANCH: 419 ST. JAMES ST.



TO CANADIAN BANKERS, MANUFACTURERS,

Your Sales Department cannot suffer from over
will suffice, it will be t

Inspect the July Issue of the

Published by International Mercantile Agency of Canada

Because It Will

Contain in ALL NEW TOWNS the names and ratings of every business man there up to date of going to press.

Because It Will

Contain complete Gazetteer Matter with expensive and complete County and Provincial Maps showing all Transportation and Express Routes in red ink, fully indexed.

Because It Will

Contain all trade information in a portable concise style, with Thumb-Nail Index to Cities and Provinces.

Because It Will

Contain the name of a reputable solicitor for each town and district to whom you can safely confide your collections or legal business without extra charge.

Because It Will

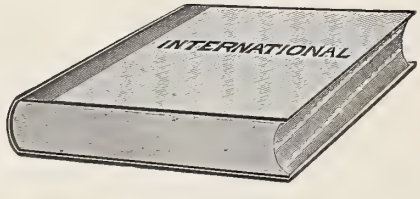
Contain the best and most comprehensive and intelligible KEY TO RATINGS published in any guide, giving 14 distinct and definite credit ratings, with each of the 21 capital ratings, as compared with the three and four indefinite ratings in other agency books.

Because It Will

Contain in its analytical ratings a distinction between the apparent moneyed worth and habit of payment of all traders, showing at a glance CAPITAL, METHOD OF MEETING OBLIGATIONS, AND THE EXPERIENCE OF THOSE WITH WHOM THE DEALER HAS HAD BUSINESS RELATIONS.

Because It Will

Contain names and ratings of Physicians, Dentists and Barbers.



INTERNATIONAL MERCANTIL

TORONTO MONTREAL WINNIPEG

IERCHANTS, JOBBERS AND ALL CREDIT GRANTORS.



otection — but if one Really Good Authority
ur own interest to

Canadian Reference Book,

limited, before you Arrange for Further Service.

Because It Will Not

Contain any blank ratings, thereby securing to you a reduction of 40 per cent. in the cost of your reports.

Because It Will Not

Contain any "dead" names to waste your postage and stationery on.

Because it is a Canadian Book

Compiled by and for Canadians, treating of matters distinctly Canadian, printed and published in Canada.

Because

You will get the best value for your money, which will be kept in circulation in your own country.

Look into this matter for yourself. Our representative will be glad of an opportunity to "prove up."

KEY TO RATINGS

EXPLANATION

CAPITAL, . . . Indicated by Large Letters.

HABIT OF PAYMENT, " " Numerals, { % Takes discount. 1 Prompt. 2 Medium. 3 Slow.

STANDING, . . . " " Small Letters, { g good. f fair. – –

	ESTIMATED CAPITAL.	
A.	$10,000,000 and over.	
B.	5,000,000 to	$10,000,000
C.	3,000,000 to	5,000,000
D.	1,000,000 to	3,000,000
E.	500,000 to	1,000,000
F.	300,000 to	500,000
G.	200,000 to	300,000
H.	100,000 to	200,000
J.	75,000 to	100,000
K.	50,000 to	75,000
L.	35,000 to	50,000
M.	25,000 to	35,000
N.	15,000 to	25,000
O.	10,000 to	15,000
P.	5,000 to	10,000
Q.	4,000 to	5,000
R.	3,000 to	4,000
S.	2,000 to	3,000
T.	1,000 to	2,000
V.	500 to	1,000
W.	Under	500
X.	No apparent basis for Capital Rating.	
Z.	Indicates indefinite capitalization, owing to organization not being fully completed, reorganization, etc.	

GOOD STANDING "g" | FAIR STANDING "f" | – STANDING "–"

Credit not yet established. Cash dealings.

%g 1g 2g 3g | %f 1f 2f 3f | %– 1– 2– 3– | ? o

Discounts. Prompt. Medium. Slow. | Discounts. Prompt. Medium. Slow. | Discounts. Prompt. Medium. Slow.

HABIT OF PAYMENT.

New Business. Held to

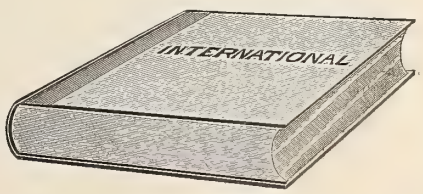
† ‡ Capital subject to responsibilities of two or more businesses.

Using any two Capital Rating Letters, e.g. "O.L." indicates amount of Capital not definitely ascertained, but estimated to be between the two amounts covered by the letters used, e.g., "O.L."—$10,000 to $50,000.

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AGENCY OF CANADA, LIMITED.

LONDON OTTAWA HAMILTON, etc.



AN AUTOMATIC FURNACE.

In the Murphy automatic smokeless furnace, special attention has been paid to the development of an apparatus for the use of cheap slack coal. The construction of the furnace is shown in the transverse section, Fig. 1, and in the halftone, Fig. 2. Coal is introduced, either mechanically or by hand, into the magazines at each side, and from these descends by gravity upon the inclined grate bars at either side of the furnace.

Stoker boxes, moving crosswise of the furnace, push the coal from the magazines out upon the grate bars, and half the bars, which are pinioned at their upper ends, are moved by a rocker bar at the lower ends alternately above and below the surface of the stationary grate bars, thus breaking up the clinker and sifting it and the ash through into the pit below. The furnace is installed in front of the boiler proper and a furnace arch serves to keep up the temperature of the burning gases so that the combustion will be complete before the gases leave the furnace chamber. Back of the grate is a continuation of the furnace arch and a brick wall, which acts as a further combustion chamber to complete the burning of the gases.

Grate bars are cast hollow and receive from the exhaust of the stoker engine steam which escapes through small openings on either side of the clinker grinder so as to soften the clinker. The clinker grinder, which is shown on the bottom of the furnace in Fig. 1, is hollow and connected by a 2-inch pipe with the smoke flue, so that the cold air passing through will prevent destruction by heat.

For operating the furnace, a small engine is placed on either side of the battery of the boilers and geared into a reciprocating bar, which passes across the entire front, as shown in Fig 2. Heated air is supplied through ducts, which pass under the coking plate, as seen in Fig. 1. The speed of the stoker boxes and grate bars can be regulated to conform to any rate of combustion required.

By the automatic action of the furnace, the removal of ash and clinker is made continuous, so that the fire is always kept clean. Coking surface is supplied so that the volatile gases are driven off before the coal is thrown upon the hot part of the grate; temperature is maintained in the combustion chamber so that the gases are fully burned, and heated air is supplied so that there are left, when the gases pass to the chinmey, no unburned hydrocarbons to form smoke. Designs have been fully perfected for installing the Murphy furnace under any type of fire-tube or water-tube boiler, and ample capacity is always

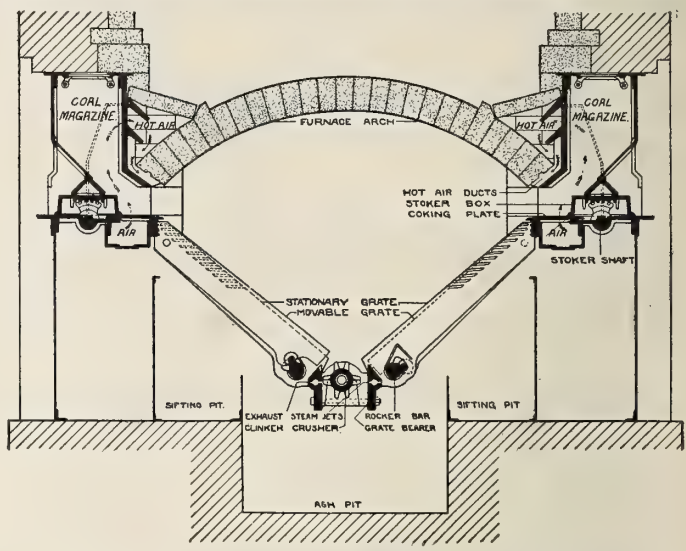


Fig. 1. Cross Section of Murphy Smokeless Furnace.

allowed to run the boiler at 50 per cent. or more above its rating with cheap grades of soft coal.

The Murphy Furnace has been on the market, commercially, 25 years; it is a matter of history that furnaces installed 21 and 22 years ago have been in continuous use under the same boilers.

Murphy Furnaces are manufactured at Detroit, Mich., the home plant for the United States, and a branch factory has been established in Walkerville, Ontario, for the Dominion of Canada, and with general administrative office, 510 Board of Trade Building, Toronto, Ontario.

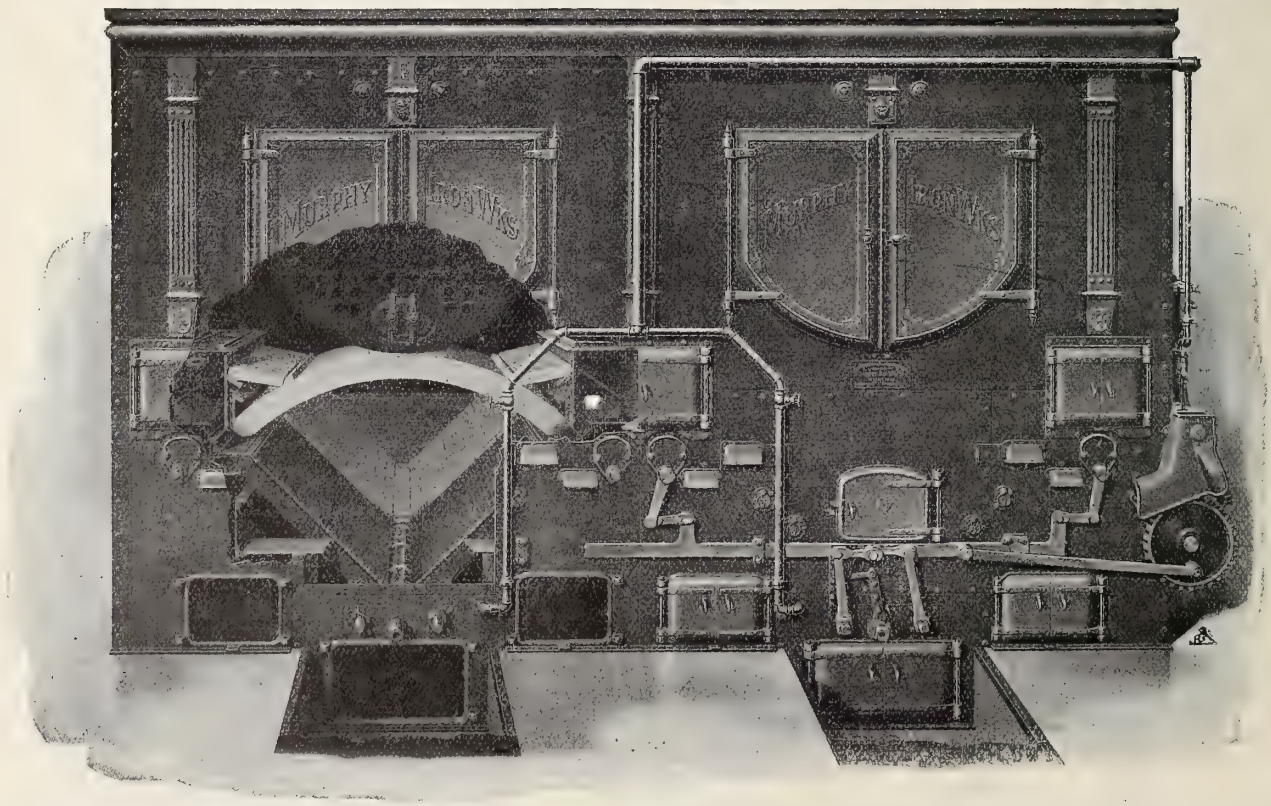


Fig. 2. View of Murphy Furnace in Part Section.

1905 1905

DOMINION FAIR

SEPTEMBER 27 TO OCTOBER 7

Under the Auspices of

THE ROYAL AGRICULTURAL AND INDUSTRIAL SOCIETY

in the Historic and Picturesque City of

NEW WESTMINSTER - - B.C.

Located in the Lower Fraser Valley—"The California of Canada."

$100,000.00 IN PRIZES AND ATTRACTIONS $100,000.00

THE RAREST OPPORTUNITY Canadians have ever had to comprehend the vastness of the Dominion, its varied and unlimited resources, and to realize the great possibilities of trade development within its borders, is offered at the 1905 National Exhibition in the Royal City of British Columbia.

SPACE FOR EXHIBITS of all sorts of natural products and manufactured articles all over the Dominion.

APPLICATIONS FOR SPACE in the Manufacturers' Building can be made to R. J. YOUNGE, Secretary of the Canadian Manufacturers' Association, who will forward them to New Westminster.

THE PRODUCTS OF BRITISH COLUMBIA will be displayed in abundance and variety that will be amazing to the people of the older Provinces. These Exhibits will include :

THOROUGHBRED LIVE STOCK AND AGRICULTURE
Luscious Fruits, Flowers, Fragrant and Beautiful, Mammoth
Timbers, Minerals, Fish, Game, etc., etc.

ATTRACTION FEATURES

The attractions, day and night, during the eleven days of the Dominion Fair, will provide entertainment of such a unique character as British Columbia is alone in a position to present.

There will be gathered together from all parts of the expansive Province, and assembled on the banks of the Fraser 12,000 Indians, who will exhibit their strange paraphernalia of peace and war, their still primitive modes of transportation, their works of semi-civilized art and superstitious fancies, affording an insight into their weird but interesting ideas of creation and life. A programme of sports will be provided for them, and as the different tribes come into competition the usual life and death struggle for supremacy will result.

World's Championship Events in Rowing and Lacrosse, Military Parades and Exercises, Horse Racing, Wild West Bronco "Busting" Exhibitions by the most daring riders of the plains, music by world famous bands, stupendous and dazzling pyrotechnic and electrical displays.

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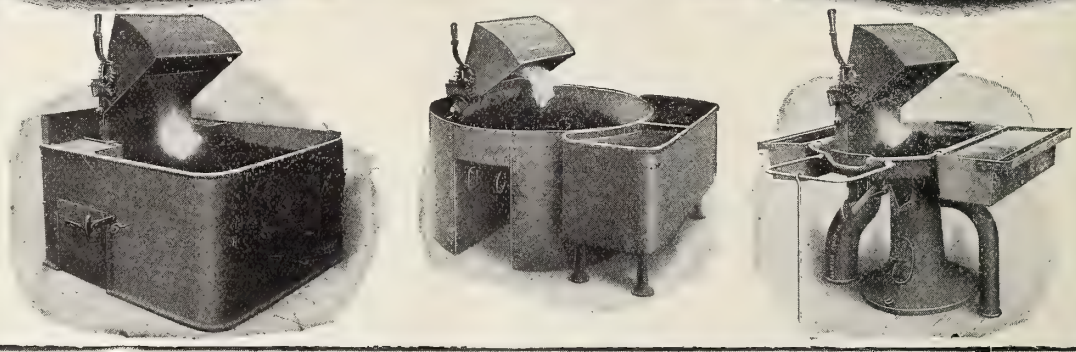
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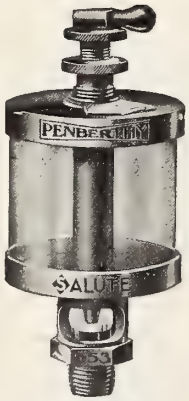


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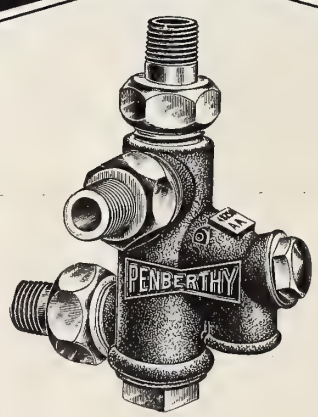
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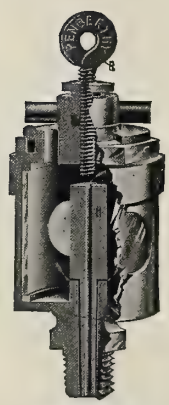


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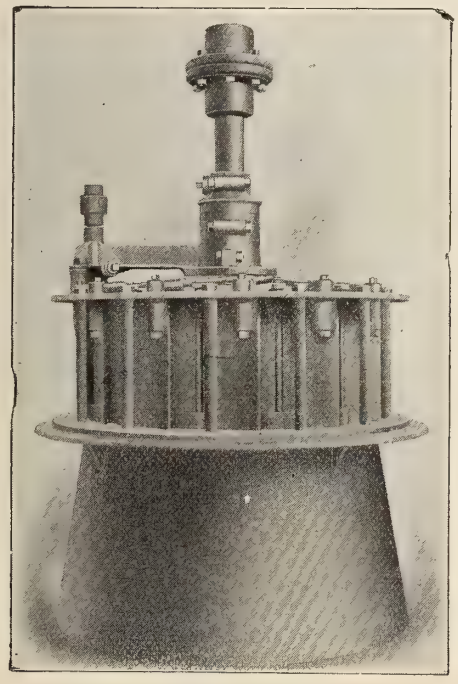
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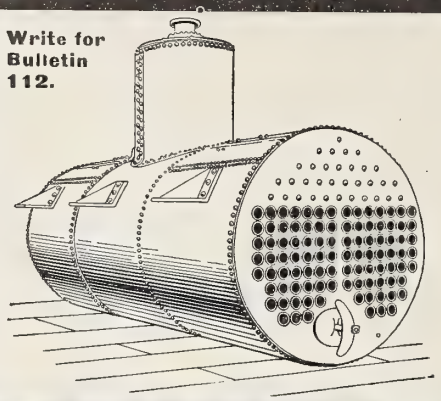
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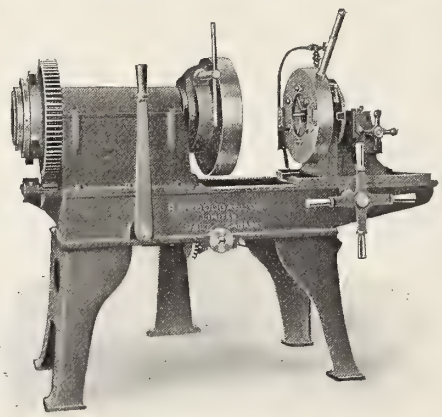
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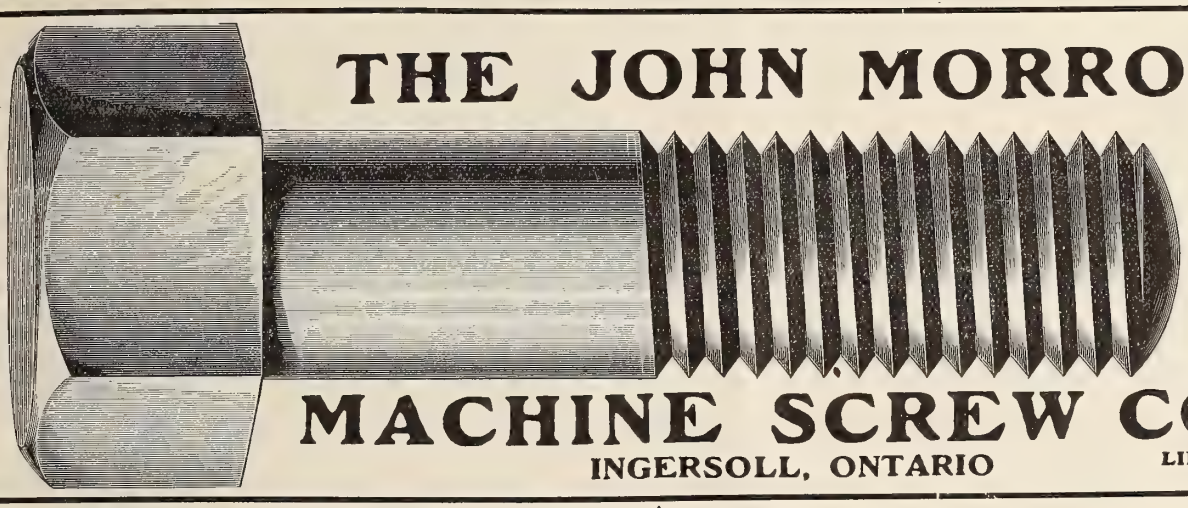
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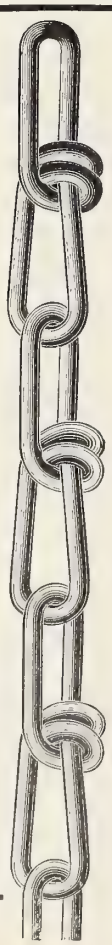
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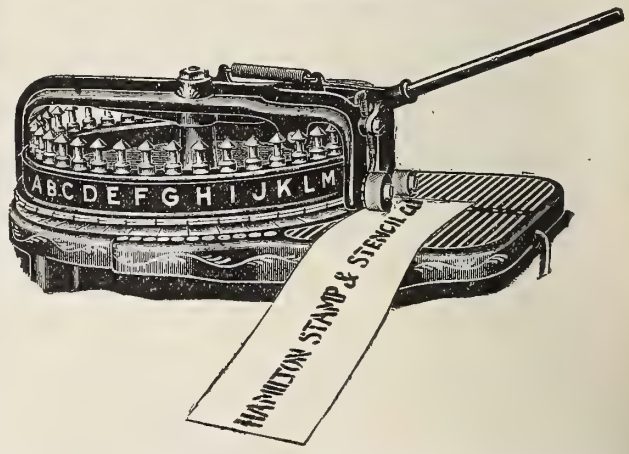
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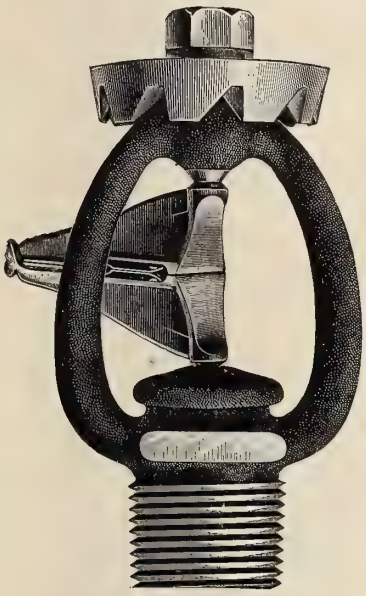


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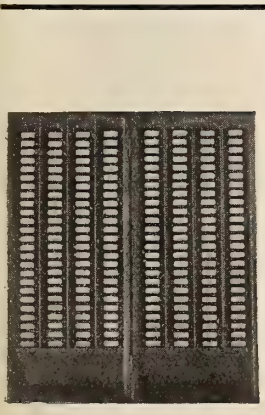
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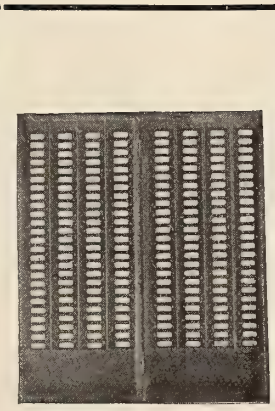
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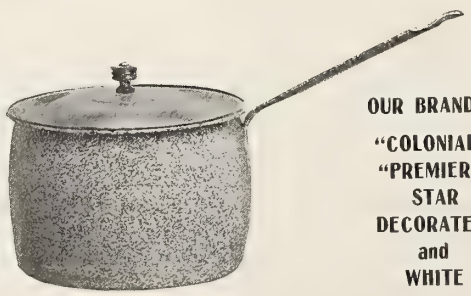
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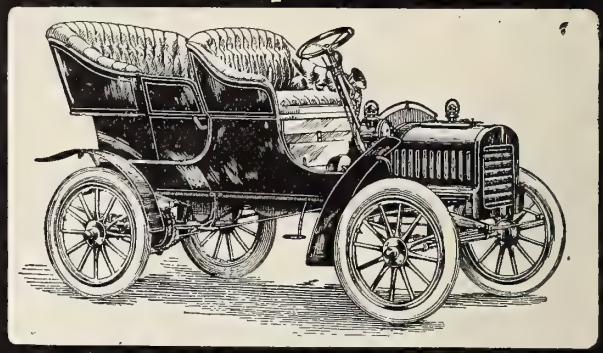
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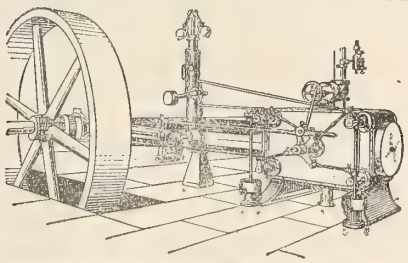
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INDUSTRIAL CANADA

A MONTHLY REVIEW OF MANUFACTURE & COMMERCE



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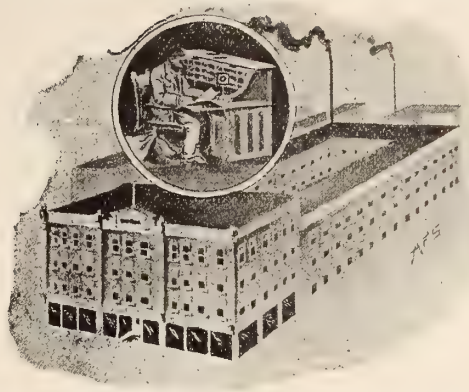
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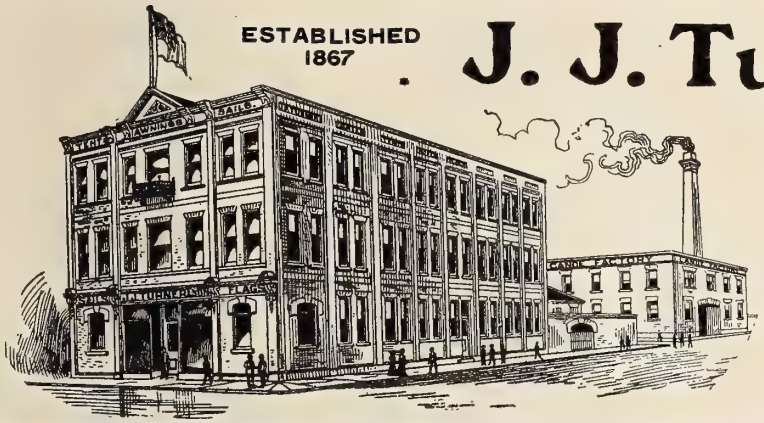
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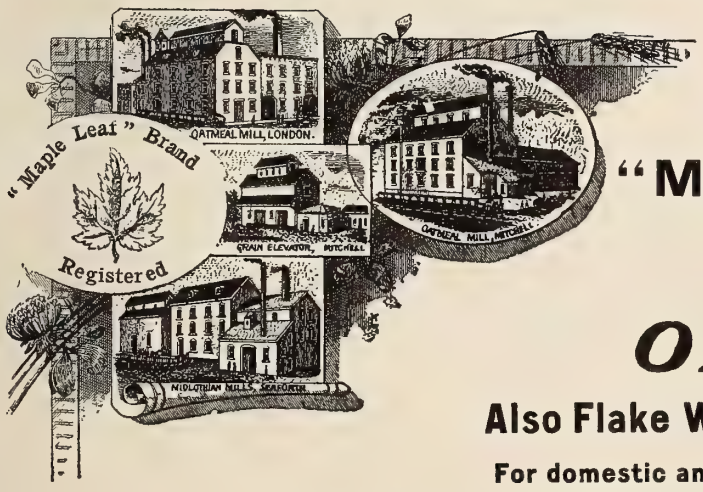
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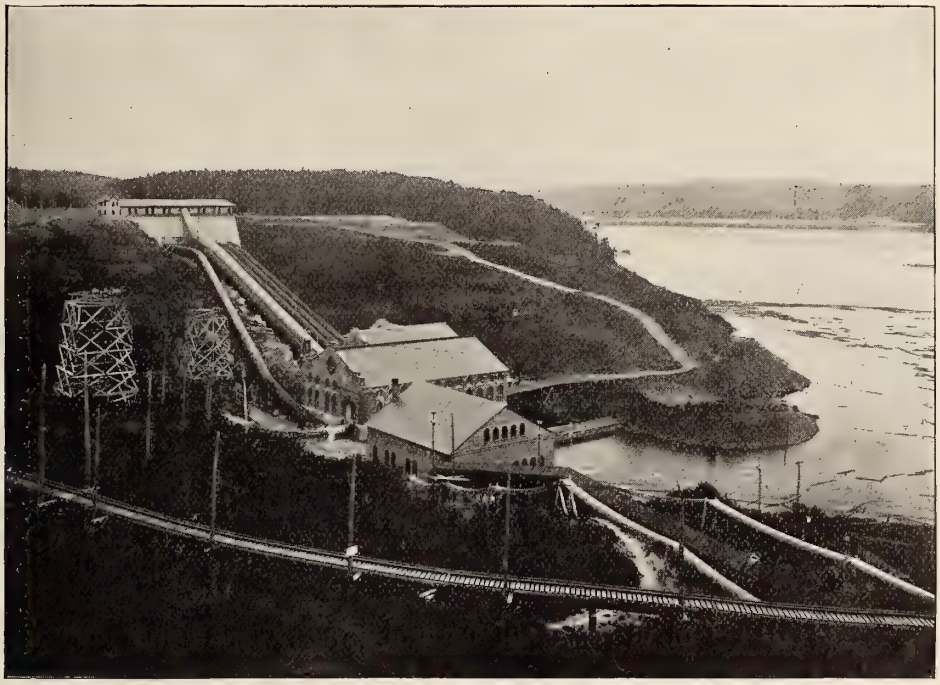
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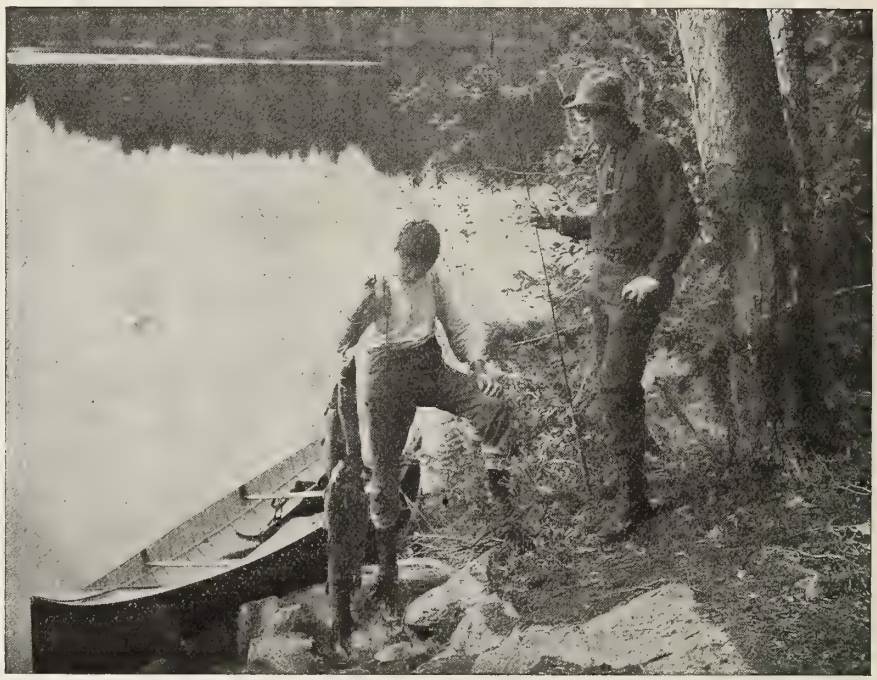
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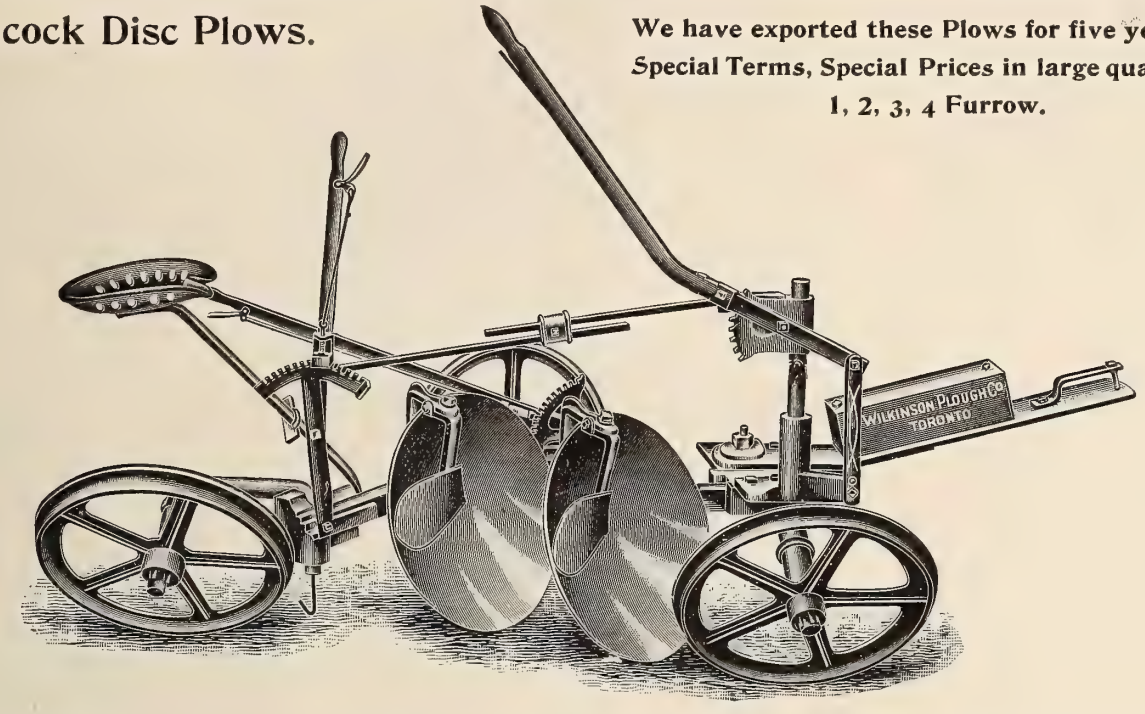
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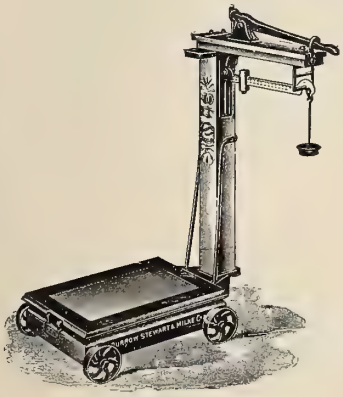


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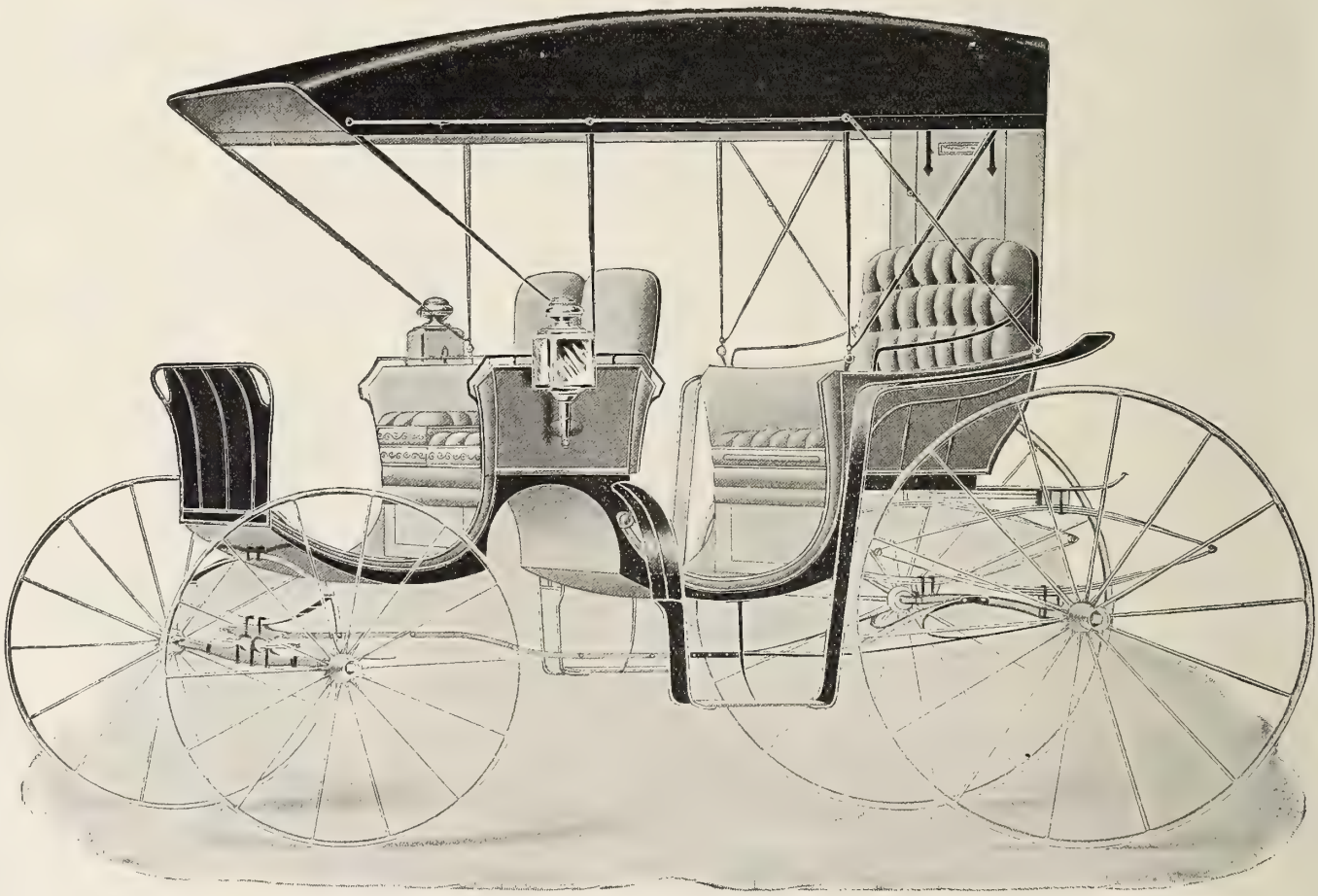
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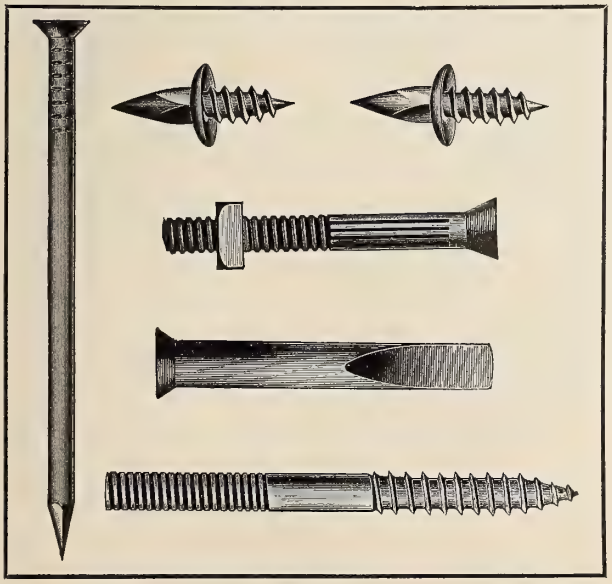
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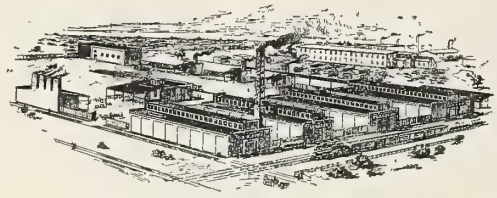
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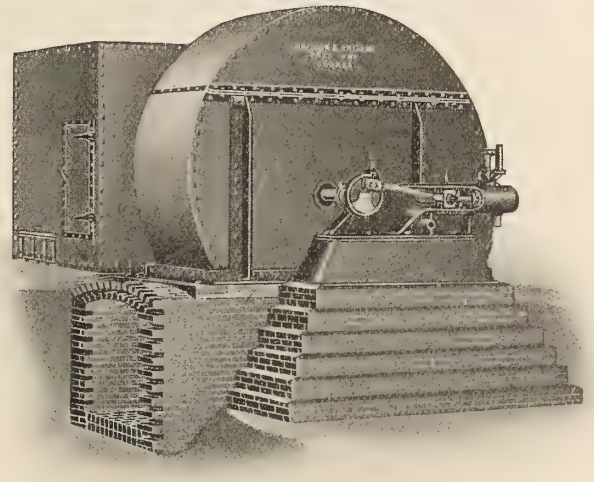
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SPECIFICATIONS: 12 to 14 horsepower, double cylinder opposed engine—situated under the bonnet in front, driving through a slide gear transmission with three speeds forward and one reverse. Bevel gear drive direct to rear axle. 90 inch wheel base. Wheels 30 x 3½ inches. Gasoline capacity for two hundred miles. Body of handsome design, with side entrance tonneau, which is also easily detachable, so as to be used for runabout purposes. Color—Ultramarine blue body with light running gear.

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Vol. V. TORONTO, JUNE, 1905. No. 11

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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THE BRITISH EXCURSION.

On the 9th inst., the good ship "Victorian," carrying the members of the Canadian Manufacturers' British Excursion party, will leave the port of Montreal for the shores of Great Britain. The occasion is unique. The party is the largest which has ever crossed the Atlantic from Canada. Never before have Canadian business men gathered in such large numbers on a similar enterprise. The representative capacity of the passengers is also a significant evidence of the interest which Canadians have in "the Old Land." And the entire absence of political motive marks the excursion as a national and, at the same time, an imperial event.

We in Canada, with the marks of a new world all around us, can never know the wealth of history, of art, and of industry with which the centuries have crowned the Motherland, until we have ourselves visited Great Britain. And on the other hand Great Britain welcomes to her commercial centres the business men who are building up pioneer industry in her greatest dominion.

It is greatly to be regretted that it has been impossible for the Excursionists to accept all of the kind invitations which came to them from so many important cities in the United Kingdom. With so large a party, however, and so short a time at their disposal, a longer itinerary is impossible, and the Canadians can only return to a large number of those who wished to entertain them, their warmest thanks.

This excursion may have many significent results, but if, through closer friendships, the discussion of mutual interests and the formation and strengthening of commercial ties, the people of Canada and of Great Britain will be led to know each other better, the purpose of the enterprise will be abundantly achieved.

Carrying with them the hearty good wishes and loyal messages of thousands of Canadian business men, who remain behind, and laden with true Canadian enthusiasm, the Excursionists have our own best wishes for a delightful trip and a safe return.

A MANUFACTURING NATION.

In the current issue of Industrial Canada an effort is made to present a general survey of the manufacturing industries of the country, and to tell in figures, so far as possible, the story of their wonderful expansion. The time seems opportune for such an undertaking, as the visit of such a large party of Canadian manufacturers to the commercial centres of the Mother Land cannot but incite in the British mind a desire for detailed information regarding manufacturing conditions in a country responsible for so unique an expedition.

And it is a matter of importance to Canadians that the Britisher should know what a splendid industrial equipment we possess in this country, for his past estimate of our ability to do things has often been inaccurate.

Ever since the historic days when the celebrated furs of the Hudson Bay Co. began to make their appearance on the British market, it has been Canada's misfortune to be misrepresented. The mental picture which the average Englishman first made of us was that of a country with cold and inhospitable shores, a country where for eight months in the year ice was king, a country fit only as a habitation for the Indian, the Esquimo and the hardy trapper. Happily this false impression is rapidly being removed.

Latterly the people of Great Britain have begun to form other pictures of us as well. Additions have been made to their mental panorama of Canadian scenery. While the so-called typical Canadian view, from which the snow-shoes and the toboggan are seldom absent, still occupies a prominent position in the group, it has gradually surrounded itself with other views, illustrative of our splendid fisheries, our magnificent forests and our wealth of minerals. More recently, thanks to the vigorous immigration campaign conducted by the Department of the Interior, we have come to be known as a land of sunshine and promise. Tons of literature have been put into circulation in the United Kingdom with the object of showing that we are above all an agricultural country, a land adapted to the growing of wheat and to pastoral pursuits. This has brought about another re-arrangement of the panorama, and now the farm

house, snuggling in the midst of its fertile fields, occupies the foreground of the landscape.

But still the picture is imperfect, unfinished. One of the most prominent features of the landscape, as it really exists, has been entirely overlooked. Important as is the farm house in Canadian economics, its domain has gradually been encroached upon by the workshop and the factory. To-day it finds itself in a position where it is compelled to at least divide the honors with its rival. Once more, therefore, it becomes necessary for the Britisher to revise his conceptions of our country, and provisions must be made in his mental picture of us for the busy factory, the hum of whose machinery is re-echoed on every side by the musical whirr of the mower and the binder.

The manufacturing industries of Canada, while primarily dependent upon the basic industries of the field and the forest, the lakes and the mines, have forged ahead at such a rapid rate that they have already outdistanced all their competitors, at least in so far as the value of their output is concerned. The total production of the 14,650 Canadian factories accounted for in the census of 1901 was valued at $481,053,375. The total combined value of the production of the agricultural, dairying, mineral, forest and fisheries industries was $511,666,306, or roughly speaking, only $30,000,000 more. But the important fact must not be overlooked that in computing the figures for 1901 no account was taken of factories employing less than five hands. In 1901 the output of factories falling in this class was 27.45 per cent. of the value of the products of establishments employing five hands and over. Computed on the same ratio, the value of the products of establishments employing less than five hands in 1901 would be $132,000,000, bringing the value of the products of all industrial establishments up to $613,103,375.

With an output therefore exceeding in value by more than $100,000,000 the combined value of the production of our agricultural, dairying, mineral, forest and fisheries industries, the importance to Canada of her manufacturing establishments is at once apparent. Other figures which strengthen their claim to recognition are their $520,000,000 of invested capital, the 344,095 work people who owe them allegiance, the $113,283,146 paid these people in wages and salaries, and the $266,527,858 worth of raw material consumed.

As previously stated, the thirty articles which follow are intended to cover this field in a general way. That they have fallen far short of conveying an adequate conception of the magnitude of our industrial establishments, we are ourselves free to admit. To any one familiar with existing conditions our failure will be only too apparent. The subject is an enormous one, one upon which volumes might be written without exhausting it. But if the necessarily brief accounts that are here given do nothing more than drive home the truth that Canada is, after all, a country liberally supplied with large and thoroughly equipped factories, destined sooner or later to play an important part in world commerce, the purpose of this issue will have been accomplished.

CANADA'S POSITION AS REGARDS EXPORT TRADE.

THE remarkable expansion of Canada's export trade within the past decade, from $117,000,000 in 1894, to $213,000,000 in 1904, has been commensurate with the increased productivity of her manufacturing industries, and the increased acreage devoted to agriculture, dairying and stock-raising.

So long as he was handicapped by a comparatively low tariff and a necessarily restricted home market, the Canadian producer enjoyed but little more than a local trade. His position was a precarious one. He required to be constantly on the defensive. Competition from the highly protected and highly specialized industries of the United States has always made it difficult for him even to hold his own. As for any aggressive action in the way of export trade, it was for many years in most lines quite beyond his powers.

But now his position is changing. With the gradual strengthening of both national sentiment and tariff he is becoming more firmly established in the home market. He has been encouraged to enlarge and modernize his plant, so that he can now produce upon a scale and at a cost hitherto impossible, while in some lines, to such an extent has he overcome the disadvantages under which he formerly labored that he has been able to compete successfully for business in nearly every market in the world.

The general outlook for the Canadian exporter is at the present time everywhere bright, except in the United States. Travellers report that there is apparent in foreign countries a general inclination to do business with Canada. Canadian goods, where tried, have not been found wanting. The advertisement which recently appeared in a South African paper, calling for tenders on school desks, and stipulating the Canadian-made article, is evidence of the favor with which at least one line of Canadian goods has been received in that country. Buyers from abroad visiting New York, who used formerly to return without so much as a look towards Canada, now almost invariably come North and leave here large orders for goods formerly purchased from United States houses. As the quality and comparative cheapness of Canadian goods become better known, foreign sales may be expected to increase very materially.

The transportation problem always has been and is still an obstacle to the development of Canada's export trade, though it is gratifying to note the improvements which are now gradually being introduced. Formerly dependent almost entirely upon the port of New York as a channel for sending shipments abroad, we are at length beginning to establish fast lines of our own, equipped with cold storage, and while these are still far from adequate, they are at least an indication of the desire to provide Canadian exporters with the transportation facilities they are so sadly in need of.

But what perhaps more than anything else has helped to smooth the way for the Canadian exporter has been the preferential tariff. Particularly in this the case in New Zealand, where a substantial preference has virtually closed the doors against United States goods, leaving the Canadian an opportunity of which he has not failed to take full advantage. The preferential in South Africa, while not so liberal, is still a valuable aid, and with the bond of union that has sprung up between these two countries as a result of the late war, the commercial tie is almost sure to be greatly strengthened. In Australia, even without a preference, Canadian goods have gained a firm foothold, and should the proposed tariff be put into effect, trade in that direction will undoubtedly develop very rapidly, possibly to an extent of which we have never dreamed.

The returns for 1904 place Canada's exports of manufactured goods at $19,864,049. This, however, does not include such manufactured goods as are the product of agriculture, dairying, fishing, forest or mining. These items amount in the aggregate to nearly $90,000,000, bringing the total exports of manufactured goods up to $109,000,000, or over $40 for every man, woman and child in the country. Flour, butter, cheese, bacon and lumber are individual lines which contribute very largely to this enormous total. Other important articles of export are: furniture of all kinds, more particularly school and office furniture, bank and library fittings, split peas and other cereals, biscuits, canned fruits and vegetables, doors, organs, scales, enamelled ware, galvanized iron ware, wheelbarrows, hardware, pumps and windmills, machinery, rubber goods, shoes, trunks and valises, leather, brushes and woodenware, soaps, agricultural implements, carriage and wagon stock, and paper.

In all these as well as in other lines good business is now actually being done, and commission men who are in close touch with the markets of other countries state that the field is limited only by the energy and determination with which Canadian producers take the question up.

A PREFERENCE WITHOUT SACRIFICE.

BY

WATSON GRIFFIN.

Some of the British advocates of Imperial preferential trade seem to have a false conception of the attitude of the Canadian people. Canadians in general undoubtedly sympathize with Mr. Chamberlain, but Canada's allegiance to the Empire does not depend upon the success of Mr. Chamberlain's campaign. Indeed, Canadians do not wish the British Government to adopt such a policy until the British people are satisfied that it will be advantageous to the United Kingdom as well as to the Empire at large.

"What can Canada offer in return for a preference?" is a question frequently asked. The fact that Canada now gives a preference to British goods seems to be generally overlooked or regarded as of no importance. Yet if this preference were granted to Germany instead of to Britain, if German goods could enter the Canadian market at a lower rate than British goods, British manufacturers would think that they were placed at a great disadvantage. The preference which is considered of little or no value when granted to Britain would be regarded as a great thing if given to any foreign country. But will Canadians increase this preference in favor of British goods in return for a preference in the British market? There is only one way in which they can do so without sacrificing Canadian interests, and that is by increasing the general tariff against foreign countries.



John Bull to Mrs. Bull—This exchange will cost us nothing, and it will help our children in the colonies.

One of the tariff resolutions adopted by the Canadian Manufacturers' Association several years ago and reaffirmed at every annual meeting since held, was, "That while the tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection to all Canadian producers."

A few of the Canadian manufacturers are entirely opposed to the principle of a preference because they have suffered so severely from the preferential clause of the Fielding tariff that they fear any form of preference, but the great majority of Canadian manufacturers approve of the principle of an Imperial preference, provided that the minimum tariff shall be high enough to afford adequate protection to Canadian industries. They favor the raising of the general tariff so that when the preference is granted industries which are now suffering severely from British competition will have fair protection, but at the same time British manufacturers will have a great advantage over foreigners in supplying us with whatever we may require to import. If the plan proposed by the Canadian Manufacturers' Association and approved almost unanimously by its members is adopted, the Canadian tariff against British goods will average higher than the present tariff against British goods, but it will be very much lower than the tariff which the United States imposes on British goods.

The immediate effect of raising the Canadian general tariff would be to transfer to British manufacturers a great part of the Canadian business which now goes to the manufacturers of the United States, Germany and other foreign countries. This amounts to many millions of dollars annually. In a few years the establishment of new factories in Canada would cause the imports to decrease per head of population, but the increase in the Canadian protection against foreign countries combined with a preference for Canadian products in the British market would so stimulate the development of Canada that there would be a large increase in the total imports from Britain. Notwithstanding the high protective tariff of the United States, that great country imported in 1903 $1,025,719,237 worth of merchandise.

Under our present system we buy what we do not produce in Canada chiefly from foreign countries, and the United States is getting a larger share of our trade every year without giving us a fair return. Under the system proposed by the Canadian Manufacturers' Association, what we cannot produce in Canada will be imported chiefly from countries of the Empire. If Canada's tariff at present averaged about as high as the United States tariff with no preference in favor of British goods, would not British manufacturers be glad to get a reduction of 33⅓ per cent.? If the United States Congress would give British manufacturers a preference of 33⅓ per cent., lowering their tariff against British goods to that extent, while maintaining it against other countries, would not the British people be pleased? Undoubtedly they would. Then such a preference as the Canadian manufacturers are willing to concede is better than no preference at all, taking for granted the fact that a general increase in the Canadian tariff is inevitable, as it is demanded by the great majority of the Canadian people.

The policies of free trade and protection have been thoroughly tested by the world, and the result is that the nations are becoming more and more protectionist. In no country is protection sentiment growing more rapidly than in the Canadian Dominion, and there can be no doubt that adequate protection is to be the future policy of Canada. Will it not be an advantage to Britain to be exempted to a considerable extent from future increases in the Canadian tariff? The Wilson-Gorman tariff passed by a Democratic Congress of the United States during the Cleveland administration averaged considerably higher than the present maximum tariff of Canada, and higher than the Canadian tariff on British goods would be if the increases asked for by Canadian manufacturers were granted. Yet the Wilson-Gorman

tariff was much lower than either the McKinley tariff, which preceded it, or the Dingley tariff, which is now in force in the United States, and the Republicans called it a free trade measure. Will anyone argue that the British people would not have been pleased if the United States Congress when adopting the high Dingley tariff in place of the comparatively low Wilson-Gorman tariff had inserted a clause giving the countries of the British empire such a preference that most of the increases in the tariff would not apply to goods imported from them?

According to the Canadian Trade and Navigation returns the total value of imports for consumption in Canada in the fiscal year 1904 was $251,464,332, including $7,874,313 of coins and bullion. The imports of merchandise from the United Kingdom were only valued at $61,724,616, including foreign goods exported from Britain, while the imports of merchandise from the United States were valued at $143,010,578. Canadians sent to foreign countries during the fiscal year 1904 for iron and steel and manufactures of iron and steel, $32,051,590, while they only imported $9,101,199 worth from British countries. A general increase of the Canadian tariff against foreign countries would give the British manufacturers a larger preference than they have now, and while it would cause the establishment of many new industries in Canada and the extension of old industries, it would divert a great deal of the trade now done with foreign countries into British channels.

During the fiscal year 1903 there were entered for consumption in Canada 187,232,471 pounds of German sugar, while only 98,843,357 pounds of sugar were imported from British Guiana and the British West Indies, but during the following year only 30,528,530 pounds of German sugar were imported for consumption, while the imports of sugar from British Guiana and the British West Indies for consumption in Canada increased to 274,477,706 pounds. This extraordinary change was due to the combined effect of Canada's preferential tariff in favor of British countries and the surtax on German goods. It is a good illustration of the way in which trade may be diverted into new channels by a preferential tariff.

In considering the value of a Canadian preference the British people should remember that Canada is a country of vast area and great natural resources which are now being rapidly developed. There is very little doubt that the population will multiply as rapidly during the twentieth century as that of the United States did in the nineteenth century. The total value of imports for consumption in Canada in the fiscal year 1895 was only $105,252,511, as compared with $251,464,332 in the fiscal year 1905. The commerce of the Dominion will increase in volume as the country grows in population and wealth, and the most effective way of diverting it into British channels is to impose a high tariff on foreign products.

It should be our first aim to give work to those British citizens who are within the borders of our own Dominion, but when we have to go abroad to supply our wants, as we must always do to a great extent, we should give our fellow citizens in other countries of the Empire a preference over foreigners. If the people of the United Kingdom will in return buy from the colonies those things which they may find it necessary to get abroad, all parts of the Empire will be benefited.

Canadian manufacturers do not favor the sacrifice of Canadian industries for the sake of a preference in the British market nor do they wish the British people to make any sacrifices for the sake of Canada, but they believe that without any sacrifice on either side the tariffs of the two countries can be so arranged that they will be mutually benefited. All that is asked for is a readjustment of taxation which would not in any way increase the cost of living to British consumers. If the British people cannot see that such a readjustment would cost them nothing, we don't wish them to make it for the sake of Canada, but if we can persuade them that they can help the colonies in this way without hurting themselves, the Empire will be greatly strengthened by such a reciprocal arrangement.

During the year ending December 31, 1904, the United Kingdom derived a revenue of £35,774,445, equal to $174,114,223, from customs taxes. According to the census of 1901 the population of the United Kingdom in April, 1901, was 41,607,552, and the rate of increase in population for the previous ten years was 9.9 per cent. Assuming the rate of increase to be maintained, the population in 1904 would be about 42,843,000. So the customs tariff taxation of the United Kingdom amounted to about $4.06 per head of population. The customs revenue of the United States for the fiscal year 1904 was $261,274,565, and the population was estimated by Government statisticians to be 81,752,000, so that the customs taxation amounted to $3.19 per head of population. Thus the British people actually paid more customs taxes per head of population than the people of the United States. Britain also levied at its ports a larger amount of customs duties than any other country in Europe, as has been pointed out by Mr. Thomas Gibson Bowles, a member of the British Parliament, but whereas the British duties were levied on a few articles, most of which were not produced in the country, the United States, Germany, France, Canada, and other protectionist countries imposed duties on a great many articles and so arranged them as to afford protection to the home producers.

According to the British Trade and Navigation returns the gross amount derived from the customs duty on tea for the year ending December 31, 1904, was £7,912,856, equal to $38,511,000, while the customs duties on coffee, chicory and cocoa produced a gross amount of £511,408, equivalent to about $2,489,000, so that the gross amount produced by duties on tea, coffee, chicory and cocoa was £8,424,264, equivalent to about $41,000,000.

The total quantity of tea entered for home consumption during the year ending December 31, 1904, was 256,509,731 pounds. Of this quantity 155,104,198 pounds were imported from the British East Indies, and 79,398,905 pounds from Ceylon, a total of 234,503,103 pounds of tea from British possessions, and only 22,006,628 pounds from other countries, a little less than one-tenth of the total coming from foreign countries. The tax on tea was increased in 1904 from 6d. to 8d. per pound. The higher tax was only in force for a portion of the year, or the revenue would have been greater. The tax has since been reduced to 6d. per pound. If this lower rate had been imposed on the 234,503,103 pounds of tea imported from British possessions, it would have yielded revenue to the amount of £5,862,577, equivalent to over $28,533,162. The immense quantity of tea imported for consumption in the United Kingdom shows that the beverage is used in almost every British household. Therefore, if the tax were taken off tea imported from British possessions, the whole community would be relieved of taxation on what is regarded by the British people as a table necessity, and taxes to the same amount could be imposed on food imported from foreign countries without increasing the burden of taxation.

If a customs tax of fifteen per cent were levied on foreign flour and wheat meal, a tax of ten per cent. on foreign wheat, oats, peas, beans, cheese, fish and poultry, alive or dead, and a tax of five per cent. on foreign living animals imported for food, and foreign dead meats, these taxes would altogether produce less than the revenue derived from the tax of sixpence per pound on tea imported from British possessions. If such taxes had been imposed upon the foreign food products imported into the United Kingdom during the year ending December 31, 1904, the revenue derived from these duties would have been as follows:

Customs Duties.	Revenue.
15 per cent. on foreign flour and wheat meal	£ 936,672
10 per cent. on foreign wheat	1,967,133
10 per cent. on foreign oats	354,828
10 per cent. on foreign peas	67,371
10 per cent. on foreign beans	57,371
10 per cent. on foreign cheese	139,086
10 per cent. on foreign fish	263,075
10 per cent. on foreign poultry	104,780
5 per cent. on foreign living animals imported for food	381,361
5 per cent. on foreign dead meat	1,509,557
Proposed preferential taxes	£5,781,234
Tax to be taken off tea	5,862,577

By this arrangement £5,862,577 of present taxation would be abolished and £5,781,234 of new taxes imposed. Such an exchange would be no robbery of the British taxpayer, and it would enable the British Government to give a substantial preference to a large number of colonial products. The taxes on coffee, cocoa, chicory and chocolate imported from British possessions might also be abolished. At present these articles are imported chiefly from foreign countries, but they would be largely cultivated in Britain's tropical colonies if such a preference were granted.

In making such a readjustment of the tariff the British Government would probably adopt specific rather than ad valorem duties.

Of course such a system of preferential duties on foreign food would not permanently produce as much revenue as the tax on tea, for after a short time the food supplies of the United Kingdom would be obtained almost exclusively from within the Empire, but when the production in British countries became equal to the demand, prices to the consumers would not be affected by the duties, and any deficiency in the revenue could be met by placing duties on foreign manufactured goods imported for consumption in the United Kingdom.

It may be asked if the duties do not increase the prices of Canadian food products in the markets of the United Kingdom, how they will benefit Canada? Canada will be benefited by the more rapid settlement and development of the country. If farmers, millers and packers on the United States side of the international boundary have to reduce the prices of their wheat, flour and meat in order to compete with Canadian products in the British market many of them will move to Canada.

If such preferential duties were imposed as outlined above, not only would the rush of farmers from the United States and Europe to our Canadian Northwest be stimulated, but the American millers who are now supplying flour to Britain in large quantities would be compelled to start big mills in Canada if they wished to retain their trade, and large meat packing houses would also be established in Canada by Americans.

There are other ways in which the high tariff taxes now paid by the British people might be so readjusted as to afford protection for home industries and favor the colonies at the same time. Most of the present customs duties are enormously high, and by reducing them, while placing protective duties on other articles, it would be possible to grant protection to many British industries without increasing the general taxation.

The home market is far more valuable to Canadian producers than either the British or the United States market, and if the Canadian market is secured to our own people by adequate protection, the country will be prosperous and progressive whether we get a preference in Britain or not. Nevertheless a preference in the markets of the United Kingdom would hasten the development of Canada, and this would be to the advantage of the Empire. The children of the farmers who settle in Canada are educated in our schools, our churches, and our newspapers to love Britain. If they were in the United States they would in many cases be educated to hate Britain. Therefore, if the British can by a preference without sacrifice stimulate settlement in Canada, they will greatly strengthen the Empire, and this will be worth while even if they do not sell any more manufactured goods in Canada than they do now.

The best way in which Canadians can help the Empire at the present time is to make Canada strong and great by building up Canadian industries of all kinds. A weak Canada will be a source of trouble and expense to the Empire; a populous and wealthy Canada will be a tower of strength to the Empire. If Canadians buy large quantities of manufactured goods in foreign countries, Canada's wealth will remain largely undeveloped, the progress of the country will be slow, and many thousands of young men who should be the pride of the Empire will be forced to go abroad to seek congenial employment. According to the census of 1900 there were nearly 1,200,000 Canadians in the United States. Most of the young Canadians who leave Canada to become citizens of the United States are almost as completely lost to the Empire as if they were killed on the field of battle. **By fostering home industries we can keep Canadians at home.**

NEW MEMBERS.

36 Applications passed by the Executive Council in May.

Almonte, Ont.
ROSAMOND WOOLLEN CO. (John S. Ewart, 2nd Member).

Brantford, Ont.
BAKER, JOSEPH & SONS, LTD., Machinery.

Chatham, Ont.
GOOLD, SHAPLEY & MUIR CO., THE (Matthew Wilson, 2nd Member).

Halifax, N.S.
MACKINLAY, A. & W., LTD. (Geo. A. Thomson, 2nd Member).
REORDAN, FRANK, Art Glass, Mirror Plates, Showcases.

London, Ont.
MCCLARY MFG. CO. (I. M. Gunn, 2nd Member).

Montreal, P.Q.
CARTER-CRUME CO., LTD., THE (Percy A. Clarkson, 2nd Member).
CRESCENT MFG. CO., LTD., Shirts, Shirt Waists, Neckwear, Ladies' Whitewear.
DAVIDSON, THE THOS. MFG. CO. (F. W. Lamplough, 2nd Member).
JENNINGS, A. & CO., Wagons, Carts, Lorries, Trucks, etc.
MONTREAL FIRE BRICK AND TERRA COTTA CO., Fire Clay Goods.
PIPER, THE HIRAM L. CO., LTD., Railway Signals, Lamps and Supplies, Marine Lamps, etc.
SONNE, THOS., SR., Awnings, Tents, Flags, Wagon Covers, etc.
TRADES PUBLISHING CO., THE (Henri Roy, 2nd Member).

Oak Lake, Man.
LEITCH BROTHERS, Flours.

Peterboro', Ont.
HENDERSON ROLLER BEARING MFG. CO., THE (H. Waddell, 2nd Member).

Sydney, N.S.
DOMINION TAR AND CHEMICAL CO., LTD., Coal Tar Products.

Toronto, Ont.
BIAS CORSETS, LTD., Corsets.
BISSELL CARPET SWEEPER CO., Carpet Sweepers.
CANADA CORUNDUM CO. (Thomas H. Lee, 2nd Member).
CANADA STATIONERY CO., Envelopes.
CANADIAN FOG SIGNAL CO., LTD., THE, Fog Signals.
DAVIS MFG. CO. (H. E. Ridout, 2nd Member).
PARIS WINCEY MILLS CO. (Hugh N. Baird, 4th Member).
RYRIE BROS., LTD., Jewelry, Engraving, Embossing and Printing.
SAGINAW LUMBER AND SALT CO., Lumber and Salt.
VICTOR VARNISH CO., LTD., Varnishes.
WILKINSON, THE J. R. CO., LTD., Gold Plate, Solders, Leaf, Foil, etc.

Vancouver, B.C.
B. C. WIRE AND NAIL CO., LTD., Wire and Wire Nails.

Wellington, Ont.
NILES, W. P., Canned Goods, Seed Peas and Beans.

Winnipeg, Man.
BROMLEY & HAGUE, LTD., Tents, Flags, Awnings, Tarpaulin.
ELLIS, GEO. E. & CO., Jewelry.
KEMP MFG. AND METAL CO., LTD., THE, Sheet Metal Ware.
STOVEL CO., THE, Lithographers.
WINNIPEG PAINT AND GLASS CO., THE, Ornamental Glass, Sash Doors, Office Fittings, etc.

Woodstock, Ont.
WOODSTOCK LUMBER AND MFG. CO., Builders' Supplies and Lumber.

Executive Council

MAY MEETING

Restrictions on Inter-provincial Trade — B.C. Lumbermen and the Rates on Fir Lumber and Cedar—Insurance Department Adopts a Schedule of Charges— A New Trade Index to be Undertaken at Once — Membership Nearing the 1,800 Mark.

The regular meeting of the Executive Council was held in the Council Chamber, Board of Trade Building, Toronto, on Thursday, May 18th, 1905, at 2 p.m.

The President, Mr. W. K. George, presided, and the following other members were present:—Messrs. C. C. Ballantyne, Montreal; Geo. Booth, Toronto; P. H. Burton, Toronto; Robt. Crean, Toronto; Richard A. Donald, Toronto; J. D. Flavelle, Lindsay; H. W. Fleury, Aurora; W. M. Gartshore, London; James Goldie, Galt; E. G. Henderson, Windsor; J. Hewton, Kingston; John S. McKinnon, Toronto; W. K. McNaught, Toronto; Jas. P. Murray, Toronto; J. A. Publow, Hamilton; R. C. Wilkins, Montreal; J. F. Ellis, Toronto; J. W. Cowan, Toronto; T. A. Russell, Toronto; D. T. McIntosh, Toronto.

Minutes of the previous meeting as published in the last issue of INDUSTRIAL CANADA were approved.

Communications.

Communications were received as follows:

(a) From the following members of the Council who regretted that they were unable to be present at the meeting:—Messrs. Geo. E. Drummond, J. O. Thorn, Geo. E. Amyot, H. Wright, A. S. Rogers, Ed. Gurney, S. W. Ewing, C. R. H. Warnock, Jas. Pender, W. B. Tindall.

(b) From Sir William Mulock acknowledging the resolution forwarded from the Executive Council respecting the work of the Select Committee appointed by the Dominion Government to report on the telephone systems of Canada, and stating that any view expressed by the Association would receive careful consideration.

(c) From the Department of Trade and Commerce, at Ottawa, expressing appreciation of the resolution passed at the last meeting of the Executive Council respecting the commercial agency system of the Government.

(d) From Mr. R. H. Alexander, suggesting that the Association should urge that immediate steps be taken towards establishing a reciprocal preferential tariff between Canada and Australia. This communication was referred to the Tariff Committee.

(e) From Mr. James P. Murray, respecting the application recently made by the Electrical Development Company of Ontario for permission to increase their capacity in generating power at Niagara Falls. This communication was referred to the Parliamentary Committee of the Association.

Reports of officers and committees were then presented as follows, and upon motion were regularly adopted.

Treasurer.

The Treasurer presented a statement showing the finances of the Association up till April 31st, 1905.

Financial Committee.

The report of the Finance Committee contained recommendations for increased assistance in the Insurance Department, the establishment of an Insurance Trust Account for the handling of the funds of that Department, and the payment of the monthly expenditure in connection with the various offices of the Association.

Industrial Canada.

The INDUSTRIAL CANADA Committee reported particularly with regard to the special June issue which was now under way.

A communication from Mr. J. O. Thorn suggesting that certain changes be made in the publisher's note preceding the editorials was received and approved.

A new cover design, specially prepared for the Association by Mr. T. L. Moffat, Jr., and Mr. Geo. Brigden, who are both members of the INDUSTRIAL CANADA Committee, had been adopted and would be used first upon the issue for August, 1905.

Special articles for the July issue were approved.

Reception and Membership.

The report of the Reception and Membership Committee submitted for acceptance thirty-six applications, the names of which are published in another column.

Association cards showing the various departments established by the Association for the benefit of its members were being distributed.

A special committee consisting of Messrs. Robt. Crean, Geo. Brigden and L. V. Dusseau were appointed to report upon the subject of qualifications for membership. It was expected that their report would be received in time to have any regulations recommended submitted to the next annual meeting of the Association.

Railway and Transportation.

The report of the Railway and Transportation Committee, which is published in another column, was presented by the Manager of Transportation, Mr. John R. Marlow.

Insurance.

The report of the Insurance Committee, which is also published in another column, was presented by the Chairman, Mr. P. H. Burton.

Parliamentary.

The report of the Parliamentary Committee was presented by Mr. John F. Ellis.

It was an exceedingly satisfactory report, and showed the result of much valuable work on the part of the committee. Among the important legislative measures dealt with were the Union Label Bill, an Act respecting Stationary Engineers in Ontario, and Ontario Labor Bureau legislation.

The committee had learned with satisfaction that the Department of Finance was at present considering the scheme for the redemption and exportation from Canada of United States silver.

Special recommendations had been forwarded to Ottawa from a joint committee of representatives from the Society of Chemical Industry and the Parliamentary Committee respecting the administration of the pure food laws in Canada.

Steps were being taken by the committee to bring before the Ontario Government the advisability of discussing with the Legislatures of the other Provinces the necessity for abolishing extra-provincial legislation and removing all unnatural barriers which tended to restrict trade intercourse between the various Provinces of the Dominion.

With regard to the nationalization of the telephone systems in Canada, it was decided that no further action should be taken until the report of the select committee appointed by the Dominion Government should be presented.

The assurances of the Ontario Government had been received that they would amend the Municipal Act so as to permit of the extension of any existing tax exemptions on machinery until such

a time as the new Assessment Act should be placed in operation.

Commercial Intelligence.

The report of the Commercial Intelligence Committee was presented in the absence of the Chairman by the Secretary.

It announced that representatives of the Association had been invited to attend an important international conference to consider questions connected with commercial and industrial expansion, which would be held in September next at Mons, Belgium. Additional information was being secured in the meantime.

Preparation work in connection with the forthcoming issue of the Canadian Trade Index was being commenced without delay, and the matter had been placed in charge of a special committee consisting of Messrs. T. A. Russell (Chairman), Wm. Stone and H. G. Nicholls.

The committee had recommended to the Department of Customs at Ottawa a number of important changes in the classification of imports which, if adopted, would greatly enhance the value of the reports to both manufacturers and importers in Canada.

Arrangements had been made to supply Canadian manufacturers visiting Europe with travelling introduction cards which would entitle them to commercial information at more than seven hundred cities in Europe.

Branches.

Reports of the Montreal and Toronto Branches were presented by Mr. C. C. Ballantyne and Mr. Richard A. Donald respectively. These reports were both received and are published in another column.

RAILWAY AND TRANSPORTATION COMMITTEE.

The Railway and Transportation Committee held its regular monthly meeting on the 17th of May, when the following matters were dealt with:—

Stove Rates.

Final conference between the railway representatives and Manager of Transportation Department has resulted in agreement covering certain commodity rates on stoves to eastern points, which are now being embodied in the railway companies' commodity tariff.

Supplement to Classification.

The proposed supplement to Canadian classification, which was reported last month to have been submitted to the Board of Railway Commissioners by the interested railways for approval, has been the subject of considerable correspondence between the Transportation Department and the railway companies. The points at issue have now been disposed of by conference between representatives of the railway companies and the Manager of Transportation Department, so that a hearing before the Board of Railway Commissioners respecting this supplement will not be necessary.

Equalization Allowances.

The Manager of Transportation Department reported that a case brought before the Board of Railway Commissioners by the Brant Milling Co., and heard at Brantford on the 26th ult., involved the question of equalization allowances by railways. Though not directly interested in the case, representations were made to the board looking to the protection of the interests of manufacturers who might be affected by a decision adverse to the principle of equalization allowances as now made by the railways at competitive points where interchange switching is not in force; and involved in railway cartage arrangements. It was urged, before giving a decision which might injuriously affect manufacturers or shippers at such points, that the board should give consideration to various conditions under which these allowances are made at different points throughout the country. The matter is in abeyance pending a decision by the board.

Connection Between Prince Edward Island and the Mainland.

The Rev. Father Burke addressed a joint meeting of the Toronto Board of Trade and Manufacturers' Association respecting the above on the 2nd inst., which was attended by the Manager of Transportation Department, who reported in full particulars of the address relating to the claims of Prince Edward Island for fulfilment of the promise made at the time of Confederation of uninterrupted connection with the mainland. The proposal now advocated by the Islanders involves the construction of a tunnel by the Federal Government at an estimated cost of ten million dollars, which this Association is asked to endorse.

British Columbia Cedar Case.

This matter is referred to in the committee's report for March. The British Columbia Lumber and Shingle Manufacturers' Association have communicated with the Transportation Department requesting that a vigorous protest be made against the proposal of the Canadian Pacific Railway to increase rates on fir lumber and reduce rates on cedar. The Manager of Transportation was instructed to communicate with the Board of Railway Commissioners.

Railway Traffic Forms and Contracts.

The committee was advised that the interested railways have appointed a committee to meet the representatives of the Board of Railway Commissioners for the purpose of discussing railway traffic forms and contracts. It is expected that a conference will be held shortly which the Manager of Transportation will attend.

MONTREAL BRANCH.

The regular monthly meeting of the Executive Committee of the Montreal Branch was held in the Association's offices on May 11, the Chairman, Mr. J. J. McGill, presiding.

A communication was received from the Canada Paper Company in regard to the annual Nova Scotia registration fee for outside companies doing business in that Province. This revived the discussion on the extra-provincial license system, and it was decided that a determined effort should be made to bring the evils of this system to the attention of the Provincial authorities, so that some action might be taken at the meeting of the Cabinet officers of the different provinces, which is to be held in Quebec next month.

A report was presented by the Secretary dealing with the objectionable tax on electric motors. The effort to have this tax removed had not been successful, though a compromise had been effected whereby the tax of $5.00 had been reduced to $2.00 in the case of persons using motors of less than 5 h.p.

Attention was called to a bill introduced into the Quebec Legislature for the purpose of restricting the hours of labor in factories. This matter was referred to the Legislation Committee for action.

Five applications for membership were passed.

TORONTO BRANCH.

The regular monthly meeting of the Toronto Branch was held on May 11. Mr. Richard A. Donald presided. Other members present were:—Messrs. J. P. Murray, S. R. Hart, P. H. Burton, C. B. Lowndes, John Firstbrook, John S. McKinnon and Ed. J. Freyseng.

Acting on a request forwarded from the Executive Council the Toronto Branch have written to all the members of the Association within a radius of about thirty miles and have asked for their views regarding affiliation with the Toronto Branch. A decision will be reached at the next meeting regarding the advisability of this proposal.

The committee appointed to interview the City Engineer reported that work on the installation of the auxiliary fire system was proceeding satisfactorily, and that the Engineer hoped to have the same in operation by December 1st, 1905.

The committee appointed to secure provincial legislation to enable municipalities to extend the exemption on machinery for another year reported that prospects were bright for having such legislation passed.

Twelve applications for membership were approved, and two were held, pending further investigations.

THE AGRICULTURE OF CANADA.

By C. C. JAMES,

Deputy Minister of Agriculture for Ontario.

It would surely be a strange oversight if in writing up the great manufacturing industries of Canada no reference were to be made to what has for so many years been the greatest industry of the Dominion, an industry that continues to expand and increase, and that promises greater things in the near future. While the industries of the city and town are those with which this journal is mainly and directly concerned, yet the men controlling these know full well that their success and their growth are contingent, to a large extent, upon the success and the growth of the great industry of the farm. Further, the object of this journal is to enlighten our kinsmen abroad as to the possibilities of this land, and no one will doubt that the agricultural industry is a matter of questioning and enquiry by those who look across the sea to find new homes and the possibility of improving their condition. While the undeveloped resources of Canada call today for more capital, more skill, and more labor, the fertile soil of this country appeals to the masses as well as the classes of the old lands with as much hope and promise as in the ever memorable days of half a century and more ago, when the westward stream of British settlers was at its greatest flow.

There is one peculiar reason why Canadian agriculture today claims a place in a series of articles such as may be found here, and it is this: during the past decade agriculture has been undergoing a great change in Canada. The crude methods that were successful in the early days of pioneer settlement have been changing to more exact methods. Agriculture is rapidly becoming systematized, through the application of those business methods that have made our town and city industries so successful. Agriculture is, in reality, a great manufacturing business, requiring skill, intelligence, and industry, and Canada has awakened to the idea that educational facilities are requisite for the employers and the workers in this important work. As technical schools and engineering courses and commercial colleges are provided for the workers in and controllers of the town and city industries, so agricultural colleges are needed for the farmers.



HARVESTING IN SOUTHERN MANITOBA.

Agricultural Education.

For thirty years and more an Agricultural College has been maintained at Guelph by the Province of Ontario. It has grown of late until now its annual enrolment exceeds 800 students. The Province of Nova Scotia has this year opened an Agricultural College at Truro, and the Province of Manitoba is erecting the buildings for an Agricultural College to be opened this year that will train young men for the farming of the prairie lands. In addition, we must refer to the magnificent and munificent plan now being worked out for a College of Agriculture at St. Anne de Bellevue, Quebec, the gift of Sir William Macdonald, who has promised as many millions as may be necessary to equip what its founder hopes will become the finest Agricultural College in the world. When a man who has made a fortune in a city manufacturing business decides to devote his wealth to the education of the future farmers of Canada, there must be something promising and potent in the movement with which he identifies himself. To these colleges we add the series of five Experimental Farms located at intervals from the Atlantic to the Pacific and maintained by the Government of Canada at an annual expenditure of $100,000. We must not omit the smaller colleges or schools of the different provinces where dairying and horticulture are taught. The varied branches of agriculture are organized into associations without number. Taking all these into consideration, we find that agriculture in Canada shows no signs of neglect, but is probably the best cared-for industry in the whole Dominion.

A consideration of these movements helps to an understanding of the prosperity that the farmers of Canada have been enjoying for some years past. The following statement shows approximately the amounts spent by the various Governments in agricultural education, experimental work, and special assistance along various lines: Dominion Government, $528,000; Ontario, $440,000; Quebec, $260,000; Manitoba, $57,000; North-West Territories, $48,000; Nova Scotia, $40,000; New Brunswick, $34,000; British Columbia, $24,000; Prince Edward Island, $10,000. Total, $1,441,000.

Foreign Trade.

The expansion of Canadian agriculture may best be shown by a condensed table giving the exports of the products of the farm. These represent the surplus after the five and a half million Canadians have been fed. The figures are taken from the Trade and Navigation returns for the fiscal year ending 30th June:—

Year.	Animals and their Products.	Products of the Field, Grains, etc.	Total.
1868	$ 6,893,167	$12,871,055	$19,341,387
1873	14,243,017	14,995,340	28,302,384
1878	14,019,857	18,008,754	30,802,010
1883	20,284,343	22,818,519	42,015,339
1888	24,719,297	15,436,360	38,187,456
1893	31,736,499	22,049,490	52,302,906
1898	44,301,470	33,063,285	75,834,858
1901	55,495,311	24,781,486	78,630,966
1902	59,161,209	37,152,688	94,517,019
1903	69,817,542	44,624,321	114,441,863
1904	64,360,440	45,621,985	109,982,425

Two comments need to be added to the above table which shows such a great expansion since the Confederation of the Provinces in 1867. For some thirty years the increase was mainly along the line of animals and their products. During the past three or four years the rapid occupation of the great wheat area of Manitoba and the North-West has been sending forward by leaps and bounds the production of grain and the exportation of grain products.



A Corner in the Winnipeg Stock Yard.

The British reader may be interested in knowing what is his relationship to this export trade. The Crimean War of fifty years ago gave an extraordinary and unhealthy boom to prices of farm products. The effects had disappeared before the period that we have taken as our starting point. Following it, reciprocity with the United States tended to develop trade north and south across the boundary line between the Dominion and the Republic. In 1866, however, the treaty was discontinued and our agriculture had to struggle as best it could against an unfavorable but not insuperable tariff. On October 6th, 1890, however, the McKinley tariff rose in all its height and might and barred the way most effectively. Canadian agriculture was given a staggering blow. Our exports to the United States were cut to a minimum, we were not prepared for other markets, our lands dropped in value, and the farmers passed through a period of gloom and depression. Slowly, however, they readjusted themselves and through the help and direction of a multitude of agencies, they sought the markets of Britain over-seas. And what has been the result? The following table shows how our agricultural productions have been affected. In this readjustment of our agriculture we have introduced new methods, and the industry has been turned into more promising lines:—

Exports of Animal and Agricultural Produce.

	To Great Britain.	To United States.
1888	$20,863,712	$17,902,021
1889	19,901,115	16,262,713
1890	22,240,548	13,485,727
Total	$63,005,375	$47,650,461
1901	$65,278,159	$ 7,845,696
1902	79,530,972	7,041,180
1903	95,761,001	8,360,700
Total	$240,570,132	$23,247,576

A Survey of the Field by Provinces.

A brief statement of the main lines of agriculture in the various Provinces may not be out of place.

Prince Edward Island.—This beautiful island in the Gulf of St. Lawrence, having an area of 2,184 square miles and a population of 103,259, is essentially an agricultural province. The salt water washes its shores. The land is rolling, and, in many respects, reminds the traveller of some of the English districts. Its meadows are rich and eminently adapted to sheep grazing. The potatoes of the island are excellent. Dairying has, during the past ten years, made some progress. The island is practically all taken up with farming, and every man owns his own farm.

Nova Scotia.—Lumbering, fishing, mining, and shipbuilding have always been the great industries of this Province, though the famous dyked lands have, from the earliest days, produced abundant crops of hay for the settlers. These rich lands, after a hundred years and more of successive cropping, still produce large quantities of hay. Potatoes, here also, are an abundant crop. The celebrated Annapolis Valley, as well as other sections, produces apples in abundance and of superior quality. In live stock, Nova Scotia excels in its mutton and fine roadsters.

New Brunswick.—Lumbering and fishing have monopolized the labor and the capital of a large portion of the residents of this Province. Apple growing and dairying are now receiving special attention.

The three Maritime Provinces just referred to are very similar in their agricultural methods. Combined, they possess 96,000 farms, having an average size of about 120 acres. They grow but little wheat, depending upon the prairie grown wheat for their flour. Thus, together they had only 88,000 acres of wheat in the census year, 1901.

Quebec.—There are two distinct kinds of farming in Quebec: that carried on by the English-speaking farmers in the Eastern townships; and the farming of the French-Canadians, still retaining many methods brought over in the early days from the Provinces of France. The French-Canadian farmer is largely self-supporting, supplying most of his domestic wants in food and clothing from his land. In the Eastern townships live stock and dairying have received special attention. Quebec is the largest producer of creamery butter in Canada.

Manitoba.—The best wheat in the world is produced in the Red River Valley of Manitoba. The increase in live stock is worth noting, as it shows that the farmers of this Province are gradually turning to mixed farming as their increasing capital permits, but wheat production is the characteristic feature. The following table shows the growth in wheat production:—

	Acres.	Bushels.
1889	623,245	7,201,519
1894	1,010,186	17,172,883
1899	1,629,995	27,922,230
1903	2,442,873	40,116,878
1904	2,412,235	40,000,000

British Columbia.—Mining, lumbering and fishing have been the great attractions for settlers, but farming has of late been attracting many settlers to the rich valleys of the mainland, and the large areas of cultivable land on the island. The climate over a large area resembles that of Great Britain. Fruit growing is developing very rapidly, while in some sections dairying and feeding live stock are receiving much attention.

North-West Territories.—Soon after this comes out in print, the new Provinces of Alberta and Saskatchewan will take their place in the great Dominion. The population is increasing very rapidly. Wheat-growing is the great industry. The areas of these Provinces are immense; the settled portions very limited. There is great variety in climate and soil. Over great stretches of country, ranching is the only industry. From across the Atlantic to the East and from the farming States to the South,

there have set in increasing streams of home-seekers that will, in a few years, build up a great and, it is believed, a very prosperous agricultural settlement in this great area of prairie lands.

Spring Wheat Crop in N.W.T.

1898....	307,580 acres	5,542,478 bushels
1902.....	625,758 acres	13,956,850 bushels
1903....	837,234 acres	16,029,149 bushels
1904.....	965,549 acres	16,875,537 bushels

Ontario.—This Province, through its mixture of races, has developed agriculture along many lines. The variety of soils and climate has given rise to a great variety of productions. In one section dairying may be the main occupation; another the breeding and rearing of live stock; in another, fruit growing. Agriculture has been developed along all lines. For the past six or seven years agricultural growth has been most marked. The result has been a steady improvement in the value of holdings, and an expansion that has kept the whole Province in a fairly prosperous condition. The following table sums up the situation:—

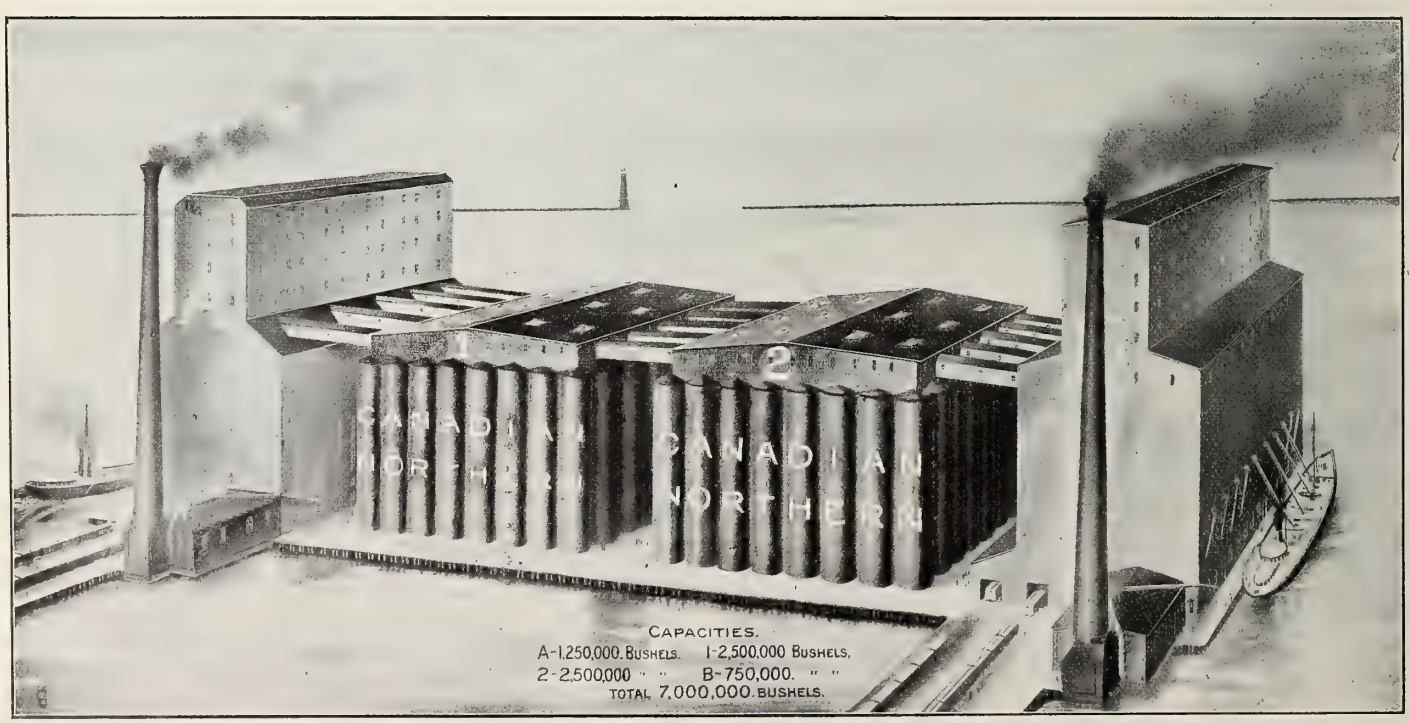
Farm Values of Ontario.

	Land.	Buildings & Impls.	Live Stock.	Total.
1897.....	$554,000,000	$257,000,000	$ 94,000,000	$ 905,000,000
1899.....	563,000,000	269,000,000	116,000,000	948,000,000
1901.....	585,000,000	287,000,000	129,000,000	1,001,000,000
1903.....	621,000,000	312,000,000	154,000,000	1,087,000,000

Agriculture in Canada is as yet in its infancy. We have brought only a small fraction of our cultivable land under the plow. The census of 1901 showed that our 472,000 farmers occupied only 63,000,000 acres. There are lands of unlimited extent yet waiting the Britisher who would own his own farm. The man with limited capital can here take up a free grant claim or purchase a prairie section at a few dollars per acre. The tenant farmer can bring his little capital and buy a cleared well fitted and well-stocked farm in Ontario for little more than he pays on annual rents at home. He will find, wherever he settles, organizations and institutions ready to help him; he will find Governmental departments well equipped to advise him, and he will find himself at home among people of his own blood and kin, the descendants of those who crossed the sea half a century or more ago, with but little capital and perhaps less experience, but who have made for themselves positions of respectability and honor through the persistence of those qualities that we are so proud to believe are characteristic of the Anglo-Saxon race.



Threshing at Portage la Prairie.



The Most up-to-date Grain Handling Plant in the World.

THE MINERALS OF CANADA.

By THOS. W. GIBSON,
Director of the Ontario Bureau of Mines.

The modern industrial fabric rests upon coal and iron, and any nation which has abundant supplies of these within its own borders, as well as the capacity to utilize them, possesses the elements of commercial greatness.

Coal.

The coal-fields of Canada have been estimated at about 100-000 square miles in extent. They are found both on the Atlantic and the Pacific coast, convenient in each case to tide-water, and also in the Rocky Mountains between the mineral districts of British Columbia and the prairies of the Great West. The eastern coal areas are mainly within the Province of Nova Scotia, where in the Cape Breton, Pictou and Cumberland fields they cover an extent of perhaps 650 square miles, the beds having a workable thickness in Cape Breton up to 60 feet, in Pictou of 70 feet, and in Cumberland of 30 feet. Nova Scotia coal is bituminous, and in many cases coking, resembling the coals of the North of England. Besides the market it finds on the spot for steam-raising and domestic purposes, making gas, coke, etc., it is largely exported to the New England States. The product of the Nova Scotia coal mines in 1904 was about 5,700,000 tons.

The Pacific coast coal-fields are on Vancouver Island, where the output, which in 1903 was some 750,000 tons, is in about equal proportions exported to California and marketed on the mainland of British Columbia. The Crow's Nest collieries, in the Rocky Mountains, in 1904 raised upwards of 1,000,000 tons of coal, a considerable proportion of which was converted into coke for use in the smelters of the Province. British Columbia coal, both from Vancouver Island and the mainland, excels in quality any yet found south of the line, and the market both in Canada and the United States is very large, notwithstanding that the Californian demand has of late been somewhat interfered with by the large supplies of fuel oil discovered in that State.

The coal in Manitoba and the north-western territories is mainly lignite, of good quality and suitable for domestic use. The lignite areas of Manitoba have been estimated at 15,000 square miles. Over an extent of country, consisting of about 50,-000 square miles, and stretching from the boundary line between Canada and the United States north to the Peace river, coal is found of various kinds and in many places. Excellent bituminous coal is worked extensively at Lethbridge, and occurs plentifully on the Bow and Belly rivers; anthracite or semi-anthracite is found near Banff; lignite seams of great thickness are exposed in the banks of the Saskatchewan and many other streams, and a good quality of bituminous coal is found on the Peace river. The total yield of coal in Canada in 1904 was 7,509,860 tons, valued at $14,599,090.

Iron.

The iron ores of Canada are widely distributed, but so far have not been largely worked. Almost all the known varieties of ore occur, hematites, magnetites, carbonates, chromic ore, bog ore, etc. In Nova Scotia there are deposits of iron ore in proximity to coal, in Quebec stretches of magnetic sands in the St. Lawrence river, and chrome ores of good quality, and in Ontario large bodies of magnetite, hematite and ironstone, the Helen mine in Michipicoton producing about 300,000 tons of good hematite per annum. West of Ontario little has been done in opening up iron mines, but in the Rocky Mountain, Vancouver Island and Texada Island regions of British Columbia iron ore bodies of good promise both in quality and quantity are known to exist. In 1904 some 350,000 tons of ore was raised in Canada, about 208,000 tons of which was produced in Ontario.

The manufacture of pig iron and steel has been developed to a higher stage in Nova Scotia and Ontario than in any of the other Provinces of the Dominion. In all some nine works for smelting ore and making steel have been erected, the total investment in which is about $35,000,000. The output of pig iron in 1904 was 303,454 tons, but the aggregate capacity of all the plants is much in excess of this quantity. Several other furnaces are being projected, largely with the view of producign iron and steel to meet the demand for agricultural and other machinery from north-western Canada. Pig iron and steel are both bonused from the Dominion Treasury.

Gold.

Most of the gold produced in Canada comes from the placer mines of the Yukon Territory, which first began to be productive in 1897, and which in the eight years ending with 1904, yielded no less than $105,862,000. High-water mark was reached in the Yukon production in 1900, when it was $22,275,000; last year it was $10,337,000. No doubt this region will continue to produce considerable quantities for years to come. British Columbia showed a yield for 1903 of $5,873,036, mainly from the lode mines of the Rossland and other districts, but partly also from the placer workings at Atlin and Caribou. The Nova Scotia production in 1904 was about $250,000 in value. Taking the whole of Canada, the yield in 1903 was $18,834,490, and in 1904, $16,400,000.

Silver.

Of silver the principal source is the silver-lead ores of British Columbia, of which there are numerous and large deposits. The bounty granted by the Dominion Government on lead ores has stimulated activity in the silver-lead fields, and the output for 1904 was 3,718,668 ounces, worth $2,127,859. Ontario has also many silver mines, but for the most part they have been idle since the fall in the price of silver took place some years ago. Recently, some remarkably rich discoveries of native silver were made in the district of Nipissing, where the metal occurs profusely in narrow veins along with cobalt, nickel and arsenic. The first production was in 1904, when some 200,000 ounces were obtained. Up to the end of May, 1905, perhaps 600,000 ounces have been won from this field.

Copper.

Copper comes mainly from British Columbia, Ontario and Quebec, although there are bodies of copper ore in nearly all of the other Provinces. In the first-named Province, the ores being mined are of low grade in copper, but contain values in gold and silver which enable them to be worked at a profit. The mines are chiefly in the Boundary, Rossland and Coast regions. In the Boundary camp the average copper contents of the ore are about 1.5 per cent., in Rossland about 1.2, and in the Coast District about 3.5. The copper of Ontario comes almost wholly from the nickel-copper ores of the Sudbury region, and is exported as matte to the United States and England to be refined. In 1904 the output of Ontario was 2,455 tons, and from the whole of Canada 21,485 tons. In Quebec the source of the copper is the copper pyrites mines of Capelton, which are worked primarily for their sulphur contents.

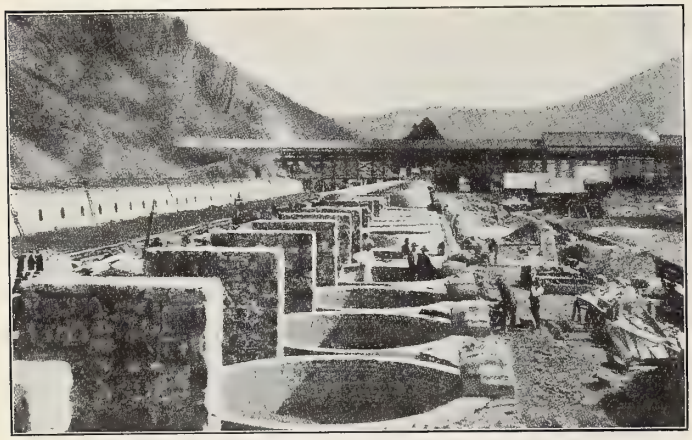
Lead.

The lead mined in Canada in 1904, 19,000 tons, was about twice as much in quantity as in 1903, owing no doubt largely to the encouragement given by the bounty granted by the Parliament of Canada in 1903 of 75 cents per 100 pounds of lead con-

tents in the ore if smelted in Canada. There is a proviso that when the standard price of pig lead in London exceeds £12 10s. per ton of 2,240 pounds, the bounty shall be reduced by the amount of such excess. Practically all the lead is produced by British Columbia, where a lead refinery went into operation last year at Trail.

Nickel and Cobalt.

The Canadian nickel mines are the only ones in America, and now constitute the principal source of the world's supply of this



Coke Ovens at Fernie, B.C.

metal. They are situated in the Sudbury district of Ontario, traversed by the Canadian Pacific Railway. The ore is a pyrrhotite carrying both nickel and copper, and occurs as irregular lenses or masses on or near the contact of a belt of eruptive rocks with the granite. The deposits were first worked for their copper contents, and the presence of nickel was only detected because of the difficulties encountered in treating the ores. The principal producer is the Canadian Copper Company, whose works are at Copper Cliff. The mine of this name has been worked to a vertical depth of about 1,000 feet, but most of the company's ore now comes from the Creighton mine, where a huge quarry has been sunk upon the ore body. The mine is a very large one and the ore is unusually rich, carrying about 6 per cent. nickel and 2 per cent. copper. The Mond Nickel Company's works and mines are at Victoria Mines, a few miles farther west. Both these concerns produce a Bessemer matte containing about 80 per cent. of nickel and copper, which is exported for further refinement and separation, by the former to the United States, and by the latter to Wales. The production of nickel in 1904 was 4,743 tons, valued at $1,516,747 in the matte at the mines.

Cobalt is found as a constituent of the nickel-copper ores of Sudbury, but a much more abundant source of supply has been opened up in the silver-cobalt veins of the Nipissing district of Ontario, already mentioned. The cobalt contents of these ores amounts to about 16 to 18 per cent. In 1904 some 29 tons, worth $36,620, was obtained from these two sources.

Platinum is procured in small quantities in the placer mines of British Columbia, and is also recovered as a bye-product in treating the nickel-copper mattes of Sudbury, together with a similar percentage of palladium.

Deposits of zinc ore are known in Ontario, and this metal also occurs as an impurity in some of the Slocan silver mines, British Columbia. The production is as yet on a small scale, being about 234 tons in 1904, having a value of $24,356. This came from Ontario.

Non-Metallic Minerals.

In many of the non-metallic minerals used in the arts Canada is singularly rich. The list includes asbestos, mica, graphite, corundum, apatite, arsenic, petroleum, natural gas, salt, feldspar, talc, sulphur ores, and gypsum.

The asbestos mines of Black Lake, Thetford and Danville in the Province of Quebec, yield all of this substance mined in America. The fibre, occurring as it does, in veins in the serpentine rocks, is long and silky, and is in much demand. Improvements in processes and machinery now enable much of the product, which formerly went to waste, to be saved as second and third-rate qualities. Some 35,635 tons, having a value of $1,167,238, was raised in 1904. The market is mostly in the United States.

The Provinces of Quebec and Ontario enjoy pretty nearly a monopoly of the mica yield of the continent. There are several varieties, but the so-called "amber" mica, or phlogopite, is most esteemed, and is considered the best for use in manufacturing electrical machinery, being very flexible and offering great resistance to the passage of the electric current. The output of mica in 1904 had a value at the mines of $152,170.

Graphite is also found in Ontario and Quebec, but the production is as yet not very large, amounting in 1904 to 452 tons, worth $11,760.

The corundum mines of eastern Ontario are probably the most extensive known. The mineral occurs as crystals of varying size in nepheline syenite, and when crushed, cleaned and graded, furnishes a first-class abrasive. Two companies are producing grain corundum, and last year had a united output of 1,665 tons valued at $150,645.

The ores mined for their sulphur contents are iron pyrites in Ontario and copper pyrites in Quebec. Of the former 13,451 tons worth $43,716 were raised in 1904, and of the latter 26,481 tons worth $109,875.

Feldspar for pottery making is quarried in Ontario and exported to the United States. In 1904 10,983 tons were raised, valued at $21,966.

Arsenic is obtained from the silver-cobalt arsenides of Pipissing already spoken of and from the auriferous mispickel of Hastings county, both in Ontario.

The stratified rocks of southwestern Ontario have for many years yielded considerable quantities of petroleum, natural gas and salt. The production in 1904 of the first was 17,237,220 gal-



Canadian Smelting Works, Trail, B.C.

lons valued at $904,437, of the second $253,524 worth, and of the third 55,877 tons worth $362,621.

Building stone of many kinds, including limestone, marble, sandstone and granite, clays for making bricks and pottery, marl for Portland cement, and in fact, building and construction materials of all kinds, are abundant throughout the whole of Canada. The Portland cement industry, for example, has made great strides in Ontario of late years. In 1891, when it began, the output was 2,033 barrels, and in 1904, it had risen to 880,871 barrels having a value of $1,239,971.

The total mineral production of Canada for the year 1904 had a gross value of $60,343,165.

CANADA'S FISHERIES.

By PROF. E. E. PRINCE, F.R.S., Canada,
Dominion Commissioner of Fisheries, Ottawa.

Among the great natural resources of Canada the fisheries take a high place. They are not excelled for vastness and variety by those of any other country. The seaboard on the east and west is washed by two oceans (the Atlantic and Pacific) furnishing a field, rich and inexhaustible, for the most remunerative cod, haddock, lobster, mackerel, salmon and herring industries in the world. Not less amazing is the productiveness of the waters of the interior, "a territory," it has been truly said, "of broad lakes and flowing rivers." All the waters of the Dominion, both salt and fresh, on account of their coldness and purity, are favorable for the best kinds of marketable fishes. "The minor lakes and lakelets," wrote Dr. Greswell, "may be counted literally in thousands . . . and are as valuable, acre for acre, as the richest agricultural land." While Professor Elwyn, struck by the surprising abundance of the finest game fish, declared that "Canada is indeed the paradise of the angler."

An army of nearly 80,000 fishermen exploits these vast waters, and the annual value of the fish caught, which is officially given as fluctuating between twenty and twenty-five or twenty-six millions of dollars, must actually reach thirty-five or thirty-six millions, when account is taken of the catches made by Indians, Eskimos, hunters, miners, Hudson's Bay Company employees, and others, in the more remote portions of the Dominion.



A Catch of Fraser River Salmon.

For nearly five hundred years the fishing fleets of Spain, Portugal, Scandinavia, France, the Netherlands and Britain have resorted to the famous "banks" off the shores of Canada, and, later, old Colonial settlers and the fishermen of the United States, have secured there incalculable quantities of fish for the markets of Europe and America. At Confederation (1867) the value of the fisheries were reliably estimated at less than $4,000,000, but ten years later (1877) they had risen to over $12,000,000 in value, while in 1887 they exceeded $18,000,000, and in 1897 they amounted to $22,783,546. The last official returns for the year 1903 state the value at $23,101,873.

On the whole the cod fisheries take the premier place and often exceed $4,000,000 in yearly value; but the salmon industry is a close rival, rarely falling below $4,000,000, though occasionally, as in 1901, reaching a value of $7,000,000, the vast salmon canning enterprises on the Pacific Coast contributing over two-thirds of that enormous value. The British Columbia salmon industry is, in many respects, a most remarkable one, employing, it is estimated, over 18,000 persons, probably a quarter of them being actual fishermen. Between 70 and 80 huge canning establishments pack the fish, the value of these factories and their splendid plants exceeding $1,500,000.

The only fish-preserving industry on the Atlantic Coast comparable to it, is that of lobster canning. Nearly 900 canneries are located at all available points along the coast from Labrador and Magdalen Islands to Grand Manan, but their value is barely $491,000, exclusive of lobster traps, 1,363,000 in number and valued at about $890,000. The entire inshore waters of Canada's Atlantic Coast appear to be one immense resort for lobsters. Yet owing to excessive fishing, and constantly increasing quantities of traps and gear, the supply is diminishing rapidly. By means of lobster ponds or reserves for egg-bearing lobsters, and by the agency of hatcheries, the Dominion Government is endeavoring to maintain the supply of this valuable crustacean, which, however, appears to be absent from Hudson Bay and the northern waters, as well as from the Pacific Coast.

The herring fisheries are, as yet, not fully developed, and their total annual value (fresh, salted, smoked and canned herring), does not reach $2,000,000. A large portion of the annual catch is devoted to bait purposes. At least 40,000 barrels, selling for $1 or more per barrel, are used each season for the baiting of lobster traps in the Maritime Provinces.

Almost as valuable as the herring is the mackerel fishery, which in 1903 was estimated at $1,644,319, though in recent years, owing, it is claimed, to overfishing, especially purse-seining by foreign fishermen, the value fell to less than half a million dollars.

Halibut, haddock, smelts and so-called sardines (really small herring), range in value from $500,000 to $600,000 or $700,000 each, while the important lake-trout ($728,153) and white-fish ($883,000) fisheries are somewhat more valuable.

Few people realize the high place attained by the sturgeon, especially the caviare, industry in Canada, for while the total value is barely $200,000, the amount of sturgeon products sent into foreign markets has, it is stated, exceeded that of the famous Russian sturgeon fisheries.

The smelt, too, and the clam fisheries have grown rapidly, the latter bringing $175,000, and almost rivalling the oyster industry, which has so seriously declined that, while ten or twelve years ago, over 70,000 barrels were procured, only 35,757 barrels of oysters, valued at $178,785, were marketed in 1903.

The Atlantic deep-sea and inshore waters, yielding cod, halibut, herring, mackerel, hake, lobsters, salmon, shad, oysters and smelts, have a total annual value of not less than $13,000,000 or $14,000,000, the rivers and great lakes of the interior from the Maritime Provinces to British Columbia, abound in fine white-fish, lake-herring or lesser white-fish, pickerel or pike, perch, salmon, speckled trout and lake trout, black bass, sturgeon and other kinds, and the total value of these inland fisheries must approach $4,000,000; but it is on the Pacific Coast that the fisheries bid fair to outstrip those of the Atlantic, for various kinds of salmon, especially the blue-back or sockeye, the quinnat, and the cohoe, abound in such incredible quantities that the industry is one of the largest and most remarkable in the world, while the vast halibut banks off Queen Charlotte Islands, the herring, skill or black cod, the candle-fish or oolachan, the smelt, etc., are awaiting utilization, and, in a few years, must create great fishing industries. The true pilchard, the anchovy and other prized species occur; but at present no fisheries for these have been developed. Including the fur-seal industry, in the outside waters, the Pacific fisheries of Canada may be estimated at not less than $6,000,000 in annual value.

This rapid review of the Atlantic, Pacific and inland fisheries of the Dominion leaves out of account the extensive northern waters, including Hudson Bay, whose drainage area is no less than 2,700,000 square miles, where enormously valuable whale, seal and walrus industries have been carried on for a long period chiefly by American and Scotch firms, although the Hudson Bay Company have to a small extent developed the fisheries.

The means of protection and preservation of the fisheries adopted in Canada may be summarized as follows:—

1. Close seasons preventing the capture of spawning and immature fish.

2. The licensing of fishing operations. The licenses specify the kind and amount of fishing gear, size and mesh of nets, etc.

3. Prohibition of obstructions, pollutions, etc.

4. Patrols by fishery inspectors, overseers and guardians, and a general surveillance by a fleet of sea and lake fishery cruisers.

5. Artificial fish culture by which depleted waters are restocked from 25 hatcheries, and species are introduced into new waters. Lobster-breeding ponds have been started, egg-bearing lobsters being impounded and released under official superintendenc after the annual close season has commenced.

Along five or six important lines the Dominion Government has in recent years carried out new work of inestimable value to the



PICTOU LOBSTER HATCHERIES.
Where 160,000,000 young lobsters are being hatched out.

fisheries. Bait freezers have been erected at about thirty points along the Atlantic Coast enabling the fishermen to store bait (herring, squid, etc.) during the months of plenty, and thus have it available in a frozen state during the months of scarcity. The Government contributes one-half of the cost of each freezer, and for three years pays a bonus of $5.00 per ton on the amount of bait placed in cold storage. At Canso and other important centres large freezers to meet the needs of the fleet of "bankers," are being erected, each costing $50,000 and upwards. The erection of patent fish-drying buildings also forms part of a great scheme for aiding the fishermen and raising the standard of Canadian fishery products generally.

The utilization of fish-waste, and especially of worthless fish, such as the small shark-like dogfish, which for several seasons has infested the fishing grounds off-shore, inflicting great damage, has recently occupied the attention of the Government, and three capacious reduction works are now in course of erection, on the Atlantic Coast, which extract oil from the offal, and convert the refuse into valuable fertilizer products. Over $150,000 will, it is probable, be expended upon this scheme, during the next season or two.

Nor has Canada been behind in the scientific investigation of her fishery resources. A splendidly equipped marine station in the Maritime Provinces, floated season by season from point to point; a great-lake station on Georgian Bay; and, in the near future, a fine Biological Laboratory on the Pacific Coast, will enable the ablest investigators in our various Universities to attempt the solution of many difficult and serious problems in connection with the fisheries.

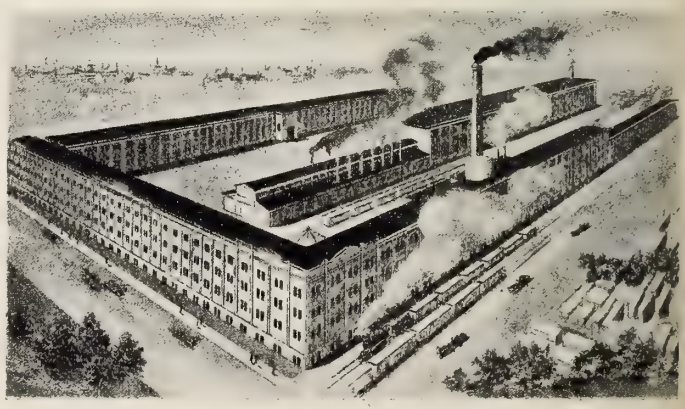
A project is on foot under Government auspices for the utilization of fishes at present valueless and their conversion into valuable foods. The marine dog-fish has edible qualities not to be despised, and just as the eel fisheries have grown in recent years (now valued at $122,000) and the smelt industry (valued at nearly $500,000) from small beginnings, so many neglected species may in the near future find paying markets. Recently a scheme for the improvement of Canadian-cured herring was started, and a Scottish expert with a special herring steamer having gangs of drift nets, and assisted by trained fishermen, coopers, and fisher girls from Scotland, began operations last year (1904) at Canso, N.S. The herring packed and marketed were pronounced by important buyers as far superior to any hitherto cured in the Dominion, and the repetition of "object lessons" by this special staff at different fishing centres will, no doubt, effectively improve the standard of our Canadian-cured herring, and incite those engaged in the industry to greatly extend it beyond its present limits.

Fish culture for the propagation of valuable food fishes is carried on not only in twenty-five hatcheries for salmon, whitefish, trout, pickerel and lobsters, but in special breeding ponds for black bass, and in the lobster pounds at various stations on the sea coast.

Substantial encouragement is given to the deep-sea fishermen by the distribution each year, in fishing bounties, of about $160,000 derived from a sum of $4,000,000 paid by the United States, under the Halifax Award, for fishery privileges formerly enjoyed by American fishermen in the inshore waters of the Atlantic coast of Canada.

A Sea Fisheries Intelligence Bureau was established in 1889 with a staff of officers who announce daily the movements of fish, and the abundance of bait in over a hundred different localities. This system is connected with the Fisheries Protection Service, whose fleet of armed cruisers prevent foreign poaching in territorial waters and on the great lakes, and aid in the general enforcement of the provisions of the Dominion Fisheries Act, and the mass of regulations under that Act.

A Cabinet Minister, it only remains to add, with a deputy, a Commissioner of Fisheries, and a large staff of inside and outside officers, carry out the administration of the fishery laws. In addition to the Marine and Fisheries Department, in Ottawa, certain provinces exercise further licensing and other privileges, but the existing uncertainty as to the precise limits of Dominion and Provincial authority on fishery matters will no doubt be satisfactorily adjusted ere long, and the preservation and prosperity of the great fishing industries ensured for all time to come.



THE BAIN WAGON CO., LIMITED, WOODSTOCK, ONT.

Our Financial System—Banking Facilities in Canada.

By DUNCAN M. STEWART, Esq.,

2nd Vice-President and General Manager The Sovereign Bank of Canada.

"PROGRESS" is the watchword throughout that portion of the civilized world lying between the Atlantic and Pacific Oceans north of the 49th parallel of latitude. Never was there such activity, such hopefulness, such unbounded faith in the future as exists to-day in every quarter of this wide Dominion, this banner colony of the greatest Empire the world has ever known. This buoyancy, this optimistic feeling so generally prevalent is directly traceable to the country itself, the truth being that Canadians have just recently discovered themselves; they have awakened to a realization of the fact that they are the enviable possessors of a beautiful country, continental in its proportions, and unsurpassed, if indeed equalled, by any other in the world in natural resources and undeveloped wealth. The time was when many Canadians—looking upon the gigantic strides of the "Great American Nation"—felt that their own destinies depended upon the favor of their Southern neighbors. Settlers, for which the land positively yearned, did not come; on the contrary, many who might naturally have been expected to do so passed by, persuaded that "America"—that much-advertised soubriquet appropriated by the United States and worked overtime by its Immigration Department—was the true Mecca of the new world. Even the Parliamentary leaders of the people felt that a closer alliance with their neighbors was desirable, if not indeed absolutely essential, to the future prosperity of Canada, and a deputation went to Washington to sue for a trade reciprocity treaty between the two countries. The ruling powers in the United States at that time refused to consider the suggestions of the Canadian representatives, doubtless feeling that more advantageous terms could be made sooner or later—the mission being construed as an evidence of weakness and dependence which would ultimately lead to a proposal for political as well as commercial union with the United States. The Canadian people, however, were not in a mood to entertain any such proposal. They were quite prepared to enter into closer trade relations on the most favorable and friendly basis, but would never consent to annexation and consequent severance of their British connection, so that if closer union commercially meant union politically, then they would eschew both and seek to develop their own country along other lines. Spurned by her next door neighbor in face of the fact that Canada was one of "America's" very best customers, she turned with a new confidence to the mother-land, which resulted eventually in the establishment of a preferential tariff in favor of England, which has greatly stimuated trade between the two countries and brought them closer together in other ways. Sentiment has changed, and the Canadian people now know that they are not, and in reality never were, dependent upon the United States, and if there is any great feeling favorable to reciprocity between these two countries to-day, it exists in the United States and not in Canada.

But what relation has all this to the business of banking? It has a great deal to do with it. The prosperity of any country depends upon the stability of its financial system quite as much as on the stability of its Government. Since the fruitless visit of the Canadian statesmen to Washington, there have been trade booms and trade depressions in both countries, but throughout them all the banking, currency and financial systems of Canada have invariably stood the test, while those of the United States have been found wanting at the crucial moment on almost every occasion. It is the knowledge of this fact among others that makes Canadians so optimistic, so self-reliant and so confident in the future of their country. The ramifications of a commercial country's finances are so extensive and so closely associated with every department of life, that it is of the utmost importance to know that the general financial system is sound and can be relied upon to stand the heaviest strain in time of need. A careful study of the banking and financial system of Canada would be of great interest, but in this paper nothing more than a mere reference to its chief characteristics can be made.

The first thing to strike a person coming to Canada from Great Britain will be the comparatively small amount of gold and silver in daily use, and the large amount of paper money in circulation. We have only two kinds of metallic currency, silver and copper. Our silver coins are minted in denominations of 5 cents, 10 cents, 25 cents and 50 cents, and correspond roughly in size and value to the English threepenny, sixpenny, shilling and two-shilling pieces respectively. We have but one copper coin, the one cent piece, corresponding in size and value to a halfpenny, but there are a great many English pennies in circulation and these pass for two cents each.

There is no Canadian gold coinage, the English sovereign and half-sovereign being used as well as the United States ten and twenty dollar gold pieces. The exact value of a sovereign in Canadian money is four dollars and eighty-six and two-third cents, expressed thus, $4,86⅔. All of our silver and copper coins are made at the British mints, but a mint is now in course of erection at Ottawa, where Canada will make her own coinage when completed.

Canadian paper currency is issued in the following denominations by the Dominion Government and is legal tender to any amount:

25 cents (called "shinplasters").	$100—
$1—	$500—
$2—	$1,000—
$4—	$5,000—(Special, for use of banks only).
$50—	

The total amount of Government notes outstanding on 29th April, 1905, was $47,935,879. This includes $129,700 in $50 and $100 notes, and $7,800 in $5, $10 and $20 notes, being the balance still outstanding of issues withdrawn from circulation. The $5,000 notes are issued to and good between banks only and are not in public circulation. The banks are obliged to carry 40% of their cash reserves in Dominion Government notes, and this denomination was made specially for their convenience and protection.

The only other institutions allowed to issue paper currency are the chartered banks, but the denominations of bank notes can only be in $5 and multiples of five. The Government reserves the power to itself to issue the smaller denominations.

There can, of course, be no question about the safety of the notes issued by the Government, as the amount is comparatively small (at present under $48,000,000) and the assets of the whole country behind them, not to speak of a small gold reserve, but it is important to know how the bank note circulation is secured.

In the first place, every bank's notes issue is limited to the amount of its paid-up capital, and it must deposit with the Government a sum in gold equal to 5% of its outstanding circulation and constantly maintain this ratio, adjusting it in July of every year. This deposit is placed to the credit of an account called the "Bank Circulation Redemption Fund," to be used in case of failure, suspension or liquidation. This fund, although contributed to by all the banks, can be drawn upon to make up for a deficiency in the assets of any one of them. Since the fund was created, however, in 1890, it has never been necessary in the case of failed banks to draw upon it for more than the

quota contributed by those banks themselves, and as a matter of fact, the noteholders have only lost by one institution since 1867, and in that instance noteholders and depositors were paid equally at the rate of 57½ cents on the dollar. Since then bank notes have been made a first charge on the entire assets and noteholders take priority over all other creditors. To give some idea of how remote the possibility of loss to the holders of such notes must be I may mention that on 29th April, 1905, the total outstanding note circulation was only $59,941,648, whilst the total assets which represent the security therefor amounted to the enormous sum of $820,974,363. People travelling or taking up permanent residence in Canada need not worry about the safety of the paper money of the country.

We have a Post Office Savings Bank, conducted along lines similar to those which prevail in England. There is, of course, the usual "red tape" of a Government office, with its delays in getting your money out when you want it, and for this reason the department is not particularly well patronized in Canada. Another reason is that the chartered banks have savings departments, in which small deposits are taken and interest at the rate of 3 per cent. per annum allowed thereon.

The Canadian banks are banks of issue, deposit and discount, and conduct their business on much the same principle as the English country banks and the Scottish banks. The cash credit system of the latter, which has done so much to develop the commercial industries of Scotland, is widely used in Canada. It is recognized that, given good character, ability and a modicum of capital—proportionate to his requirements—a man is entitled to a certain amount of credit, and people who come within this category are fairly certain of obtaining assistance. In this way farmers are helped to purchase seed, cattle, implements, etc.; whilst the manufacturer obtains money to buy raw material, and is often assisted in carrying his manufactured products until they are marketed. It can be readily understood that through their numerous branches, the banks must always have a considerable stake in the country, and the best evidence of the wisdom of their general policy is their undeniable prosperity. The assets of the chartered banks exceed their liabilities by $147,097,193, and with one or two unimportant exceptions they all pay good dividends to their shareholders.

On the 1st July, 1867, the Confederation of the Provinces became a fact, and the "Dominion of Canada" was born. The following statement shows what remarkable progress the banks of this country have made since that time:—

	1867.	1905.
Number of banks	32	34
Number of branches	120	1,130
Capital paid up	$32,962,000	$81,613,513
Notes in circulation	10,778,000	59,941,648
Total deposits	32,896,000	509,049,116
Total discounts	56,250,000	541,675,742

Some idea of the volume of business transacted may be gathered from the fact that the total bank clearings in Canada for the year 1904 amounted to $2,741,441,000.

In actual "money in bank" there is probably no nation in the world that outstrips Canada. The total amount of money actually at credit of the people of Canada in the Government and Post Office savings banks, special savings banks and chartered banks on 29th April, 1904, was $545,456,053, being an average of $83.55 for every man, woman and child in the Dominion. These figures represent only money we *know* about, without making any allowance for that deposited with private bankers, loan companies, trust companies and investors, or that kept in hiding places. Such facts as these show that in proportion to its population, Canada is the most prosperous country in the world.

The chartered banks of the Dominion are the principal custodians of the people's savings and the laws governing them are very stringent. This is quite proper and every possible safeguard should be provided for the protection of the public in financial matters. To this end the law provides that the minimum capital on which a Canadian bank can be established is $250,000, which must be deposited with the Government, in gold before the bank can commence business. In addition to this, the directors must show to the satisfaction of the Minister of Finance that at least $500,000 of the capital has been *bona fide* subscribed, and as every shareholder is liable for double the amount of his subscription, this means that the public have security to the extent of not less than $1,000,000 before the bank can take deposits or do any other kind of banking business. This prevents weak concerns from starting and results in our having a comparatively small number of banks of varying degrees of strength, instead of a large number varying in degrees of weakness.

The Canadian banks establish branches all over the country and in this way a small town or village has all the advantages of having a bank with large capital and resources. By way of comparison it may be mentioned that under the National Banking Act of the United States banks are not allowed to open branches, and in order to provide banking facilities in the smaller places, banks may be established on a ridiculously small capital, in some cases as low as $10,000. In the large cities, the banks are usually very strong, but there are several thousand of these small banks in the United States, and they are a constant source of weakness. A few thousand dollars' loss puts one out of business, and in hard times they go into the receivers' hands by the score. From this it will be seen that the Canadian system is vastly superior to that of the United States, and the fact is admitted by many of the leading bankers in that country.

Although the chartered banks have wide powers and are able to aid materially in the development of the trade and commerce of the country, they are restricted in some ways. For instance, a bank cannot lend money on land mortgages, or real estate, nor can it speculate in land or real property of any kind. This is a very wise restriction, and had it been adopted in Australia, that country would have been saved from financial disaster some years ago. There are, however, loan companies and building societies which make a specialty of lending money on property, and farmers and other settlers can readily be accommodated by such concerns and at very moderate rates. They make loans all the way from 75 per cent. down to 40 per cent. of the value of farm and house property, and take monthly or quarterly, half-yearly or annual payments in return of the principal. The land mortgage companies and building societies have been of very great assistance to settlers in Ontario and the North-West, and for the most part have had a long and honorable record. There are over 90 of these companies doing business in Canada with a total capital of $52,000,000, and assets of $160,000,000 odd, whilst the money they have loaned on mortgages amounts to about $120,000,000 on property valued at over $200,000,000.

It will be seen from the foregoing that Canada has provided ample banking facilities for her people, and it is not extravagant to say that there are none sounder or safer in the world. Like the general laws of the Dominion they meet all reasonable requirements, without in any way affecting or curtailing the liberty of the subject. We hear a great deal about "liberty" in the United States, but as one who lived there and has substantial business interests and many personal friends there, besides being an admirer of the nation as a whole, I may say in all honesty to those in England or elsewhere who may read this article, that Canada is the real "Land of Liberty." Here we have true freedom, liberty without license, and absolute protection guaranteed to the peaceful law-abiding citizen.

It is not with any desire to exaggerate the importance of Canadian laws and the Canadian banking system, or to minimize the advantages of those of the United States that I have made comparisons to the detriment of the latter, but during a recent visit to England, Ireland and Scotland I found so much ignorance regarding "America"—which seemed to embrace everything on the western shore of the Atlantic Ocean—that I feel impelled on this occasion to show that *there is a difference* between Canada and the United States, and that, at least so far as the banking system is concerned, the difference is very much in favor of Canada.

CANADIAN WATER POWER.

A United States orator once facetiously remarked that his country had the greatest navy in the world. Said he: "We have more water than anybody else, and all we need is a few ships."

Canadians may make a claim that, while somewhat less sweeping, may be taken more seriously.

We are potentially one of the greatest manufacturing countries in the world; we have more water power than any other country, we have a profusion of raw material, and all we need is a few millions of men and money.

These are coming to us now and they will continue to come.

It is only recently that Canada's water powers have been estimated among the most valuable of her assets. The wonderful network of lakes and rivers that veins the face of this country has always had its uses. These waterways have not only facilitated settlement and pioneer work, but they have also made it possible to market vast quantities of lumber that must otherwise have been left to rot in its native woods.

These uses, however, are in their nature primitive, and as such must cease before advancing civilization.

It is necessary to the intelligent consideration of Canadian water powers, first of all, to develop a mental picture of Canada as a whole.

Imagine a vast tract of country 3,500 miles from East to West, 1,500 miles from North to South, and having an area of 3,750,000 square miles. This area may be divided roughly into forest lands, prairie and agricultural lands, mineral and waste lands, and last but not least in importance, water. At present we are concerned directly with the water, incidentally with the three other divisions.

There is no other great tract of country that approaches Canada in the continuity, diversity and utility of its water powers. The exceptional abundance of this power is due not only to the number of our lakes and rivers but also to the great elevation of our highlands or watersheds. In the United States, for instance, all the great rivers are naturally navigable for hundreds of miles; in Canada quite the reverse is true. Again, the United States, except in confined areas, is almost destitute of lakes, while in Canada over a length of several thousand miles between Labrador and Alaska, and over a width of several hundred miles, there is an almost continual distribution of lakes, lakelets and rivers; the lakes of varied outlines, dimensions and elevations above sea-level, many of them possessing facilities for the storage of their flood waters.

Going a step farther, we may divide our water system into four main divisions,—(1) the Lower St. Lawrence and the Ottawa rivers with their tributaries; (2) the Highlands, extending for thousands of miles across the northern part of Canada, draining into the Arctic Ocean through the McKenzie River, and into Hudson's Bay; (3) the St. Lawrence River from Lake Superior to Montreal (this being on a higher level cannot be included in the first division); (4) the watersheds of British Columbia which are entirely separated from all the others by the great prairie district.

Horse-Power.

It is of much interest, of course, to know what these water powers really represent in energy, or what amount of work they can be made to do towards the development of this country.

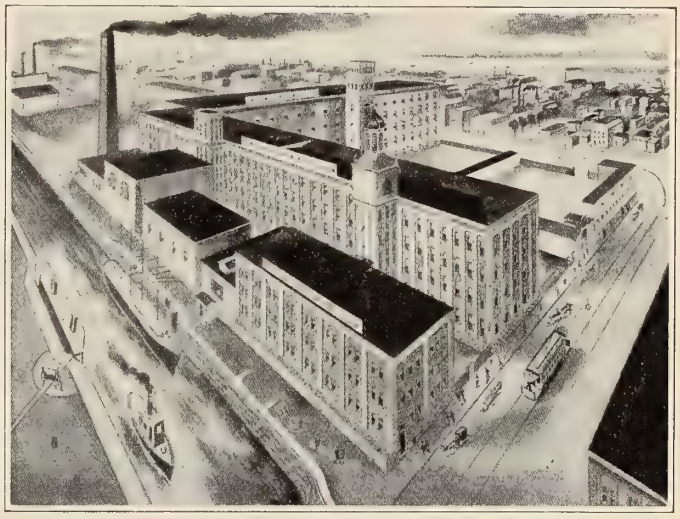
It will be readily understood that any figures given are merely estimates, but, it may be added, conservative estimates.

Mr. Keefer in his valuable address before the Royal Society of Canada gives some very suggestive figures. In estimating the probable horse-power to be developed from the water sites in our first two divisions, he spoke as follows:—

"Assuming an annual precipitation of 24 inches, and taking one-half of this as available for water power, every 10 square miles would yield an average of nearly one horse-power for every foot of fall. A million square miles (and there is much more) would give nearly 100,000 horse-power for every foot of fall. As there are several hundred feet of fall which could be utilized, our water power must be immense, and commensurate with this country in other respects."

According to Mr. Keefer, then, we may count on from thirty to forty million horse-power in the northern country and the Lower St. Lawrence and the Ottawa. Coming down to where the power can be more accurately estimated, we find that Canada's share of power from Lake Superior to Montreal exceeds ten million horse-power. As for British Columbia no estimate can be given, but it is safe to affirm that it has an abundant supply for irrigation, mining and milling.

Speaking of millions is rather incomprehensible at best. If to illustrate, it is stated that the theoretic power of Niagara alone is equivalent to the horse-power of the entire British Navy with



Belding, Paul & Co., Limited, Montreal.

its 550 warships, and that to this might be added several hundred of the largest steam locomotive engines, it may convey some idea of the vast amount of energy that has been going to waste for centuries in this country of ours.

It may be very pertinently asked why we have not until recently recognized the value of this power. The reply is that there are three principal causes of recent birth that have enhanced, to an extent at which we can only vaguely guess, the value of Canadian water powers. They are,—(1) the discovery that our spruce, of which we have an inexhaustible supply, makes a better quality of paper and allied products than that of any other country; (2) the ability to transmit electrical energy from the power site, where it is generated, to a point many miles distant, where it can be utilized for manufacturing, railroading, or for a variety of municipal purposes; (3) the discovery of immense mineral deposits of great variety that can be treated most economically by this water-generated electricity.

It may be interesting to consider a little more in detail these reasons that have been assigned for the increase in the value of our water powers.


WATER FALLS OF CANADA

Pulpwood and Wood Pulp.

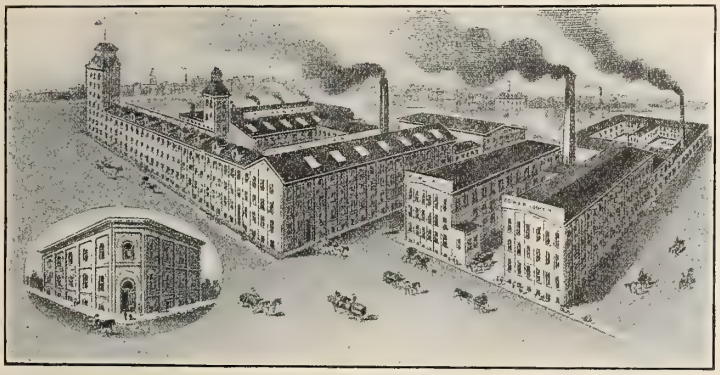
In considering the pulp industry, it is possible to recite only a few of the many interesting facts that have been ascertained by Dr. George Johnson, Dominion Statistician, and others.

Our supply of pulpwood is practically inexhaustible. A reliable estimate places it at one thousand million acres. "Experts, in order to indicate the great area in Canada occupied by spruce as its habitat, have declared that in Canada an area equal to that of England could be cut over every year and yet the reproductive powers of the spruce would maintain the equilibrum of demand and supply." There may be exaggeration in this statement, but it fairly enough gives expression to the immensity of the area filled by the growth of spruce.

There were in Canada in 1903, 39 pulp mills in active operation. The total value of the output was $5,220,000; of this amount almost $1,000,000 went to Great Britain, and about $2,000,000 to the United States; the remainder was retained for home use.

Some of the largest of these pulp mills that have been erected in the Canadian forest, to-day employ thousands of men, and are the nucleus of flourishing settlements. It may be of interest to quote here what Dr. Johnson says in reference to Lake St. John in Northern Quebec, which is drained into the St. Lawrence by the deep and sombre River Saguenay:—

"Here, then, in the single region of which the basin of Lake St. John is the great water reservoir, are rivers and streams having over 700,000 horse-power, capable of being utilized for manufacturing purposes. This, it is stated, is a power much in excess of that which can be supplied by the rivers of Norway and Sweden.



THE B. GREENING WIRE CO., LIMITED, HAMILTON.

"This territory of Lake St. John has an area of 19,000,000 acres, of which less than half a million have been stripped of their wood; the remainder are in forests. In a word, this one little bit of a water centre has a forest area equal to the whole forest area of Norway, or to more than one-third of the forest area of Sweden, and has within this area 700,000 horse-power of water fall, cascade and rapids, waiting to be harnessed in order to provide cheap power for the reduction of the best kinds of pulpwood to wood pulp and paper."

This is but one example of scores that might be adduced to show the great capacity of the rivers and streams of Canada for the production of water power easily utilizable in the manufacture of wood pulp. An idea of the great demand for these paper materials may be formed when it is said that one New York newspaper requires the product of seven acres of spruce for its daily editions.

The situation briefly stated is this: We have an unlimited market, we have an inexhaustible supply of raw material, and hundreds of splendid water powers merely await the advent of the capitalist to transform the wilderness into prosperous industrial communities.

Power Transmission.

The importance of the fact that it is possible to transmit over miles of wire many thousand horse-power of electrical energy can scarcely be over-estimated. Already some of our principal cities and smaller towns light their streets and houses and run their tram-cars with this imported power.

With the great cataract at Niagara being harnessed before our eyes, as easily as many of its lesser fellows, this modern problem of engineering gains additional interest. Already three large companies have undertaken to supply Niagara power to many private enterprises as well as to municipalities.

The future of railroading in the light of recent achievements presents a most interesting problem. That electricity is preferable to steam in almost every respect is conceded without reserve. The difficulties to be overcome are not numerous, and, it is believed, not insuperable.

Science has yet much to impart toward the economical transmission of electricity to far distant points. But even now an eminent authority has claimed that this mysterious energy may be carried advantageously for at least 300 miles. If this be so, one great obstacle to electric railroads in Canada is removed.

Another deterrent is the vast amount of money already invested in steam locomotives. Whether or not it will pay to relegate these valuable machines to the scrap heap must depend largely on the cost and availability of electrical power.

But while the advisability of entirely dispensing with steam railroads may be a debatable point, there is no question as to the desirability of having fast passenger trains run by electricity between the principal cities of Ontario and Quebec. There is undoubtedly a general sentiment in favor of such a course, and in spite of present difficulties, no one can long doubt that before this century has grown to maturity electricity will reign supreme.

In manufacturing centres also, where they have not yet this imported power, its advent is eagerly awaited, and it will not be long before Canadian water will supply the power to thousands of factories now run by United States coal.

An exhaustive survey recently made of the water powers on the Ottawa River and tributaries resulted in a report that there were within 50 miles of Ottawa 900,000 horse-power. This means that there is within easy distance, enough power to supply every need of the Capital city, and at a cost 50 per cent. less than that of steam generated electricity.

There is another department of industry in which our water powers and electricity are destined to play a wonderful part, and that is mining. Perhaps only second to our forest wealth is our mineral wealth. From Labrador to British Columbia minerals have been discovered, and in many cases in such quantities as to create the most sanguine expectations for our mines.

In most cases these properties are far from railroads and settlements, and if they are to be developed on a paying basis, we must again resort to our water power and the transmission of electrical energy to the scene of operations.

The functions that electricity can perform in mining are many and varied. It can light and ventilate the mine, run the tram-cars and hoists, do the drilling and crushing, and, in short, it is an absolute necessity to the expeditious and economical development of any extensive property. It must not be forgotten, moreover, that there are many processes in the chemical treatment of minerals that can only be carried on with the aid of a very strong electric current, and this current can be produced cheaply enough only by the use of water power.

It has been the object of this article to suggest briefly the very great importance and value of our water power in the future development and prosperity of Canada. With such an array of resources Canadians have every reason to be optimistic for the future of their country.

It would seem that from the capitalist's point of view there is no field more promising to legitimate enterprise than that presented by this country with all its virgin wealth of forest, mine and natural power.

The Canadian Manufacturers' Association.

A Brief Review.

It may not be inappropriate in this special issue to bring about a closer acquaintance between the distant readers of INDUSTRIAL CANADA and the Canadian Manufacturers' Association. As a national business organization, identified more than any other with the industrial development of the Dominion, its remarkable growth and comprehensive field of usefulness offer an interesting example of what can be accomplished through the co-operation of business men in the building up of the nation.

Early History.

The first chapter of the Association's history dates back to the year 1871. At that time the country was on the eve of a great depression, and the market was deluged with the surplus productions of United States factories. The manufacturers of Ontario and Montreal at once set themselves to directing the attention of the public to the importance of developing Canadian industries, and the adoption of the policy of protection by the Dominion Government in 1878 was due in part to their organization and work. During the period which elapsed between its organization and 1878 the Association had a hard struggle for existence. It was reorganized in 1875 as the Ontario Manufacturers' Association, and in the year 1887 its name was changed to the Canadian Manufacturers' Association, thus making it a Dominion organization. It was not, however, until the year 1899 that the Association entered on its present broad sphere of influence and usefulness. In that year a union was brought about with the manufacturers of Montreal, and the industries in all the provinces commenced not only to feel the stimulating results of organization, but to see the great benefits to be gained by hand to hand co-operation through such a central body.

To-Day.

The most ardent enthusiasts, however, scarcely dreamed that so great a change could be brought about in so short a time. In 1899 the Association was scarcely known beyond the cities of Ontario, and had a membership of only 137. To-day it is one of the strongest national organizations in existence, with more than 1,800 members, with branch offices in six of the largest Canadian cities, with special sections for fifteen of its most important industries, and working through well-equipped departments, capable of solving in the most practical manner the many problems which are facing the rapidly developing industries of Canada.

These splendid results have not been accomplished without excellent organization and much sacrifice on the part of an increasing number of Canada's best business men, who have given freely of their time and energy to the Association's work.

The Association is governed by an Executive Council of one hundred representatives. These are elected annually from the various provinces upon a per capita membership basis. They meet regularly once each month at the Head Office, when the reports of the various Officers and Committees are received, and the policy of the Association on all matters of interest kept closely in hand. In spite of great distances these meetings are well attended. The great variety of questions reported upon is indicated by practical results and progress in every department of the work. The work of the Standing Committees must always remain one of the leading features, and a word or two upon each of these may prove interesting.

Standing Committees.

The Railway and Transportation Committee has its own department, and its decisions are carried out by an expert Freight Officer, who gives his time exclusively to dealing with the transportation difficulties of the Association's members. Investigation often results in immediate settlement of these difficulties between the railway company and the shipper, but where this cannot be brought about, the Department carries the case to the Dominion Board of Railway Commissioners, and has been successful in almost every case presented.

The Insurance Department, which is the most recent development in the Association's work, is governed by its own Committee, and the work directed by an experienced Insurance Officer. Expert advice and assistance are supplied to members of the Association, improvements in risks are suggested, and very often the department is successful in securing a reduction in the rates. The importance of this Committee can scarcely be overestimated.

In no other sphere has the influence of the Association been more marked than in its attention to legislative measures, both Federal and Provincial. Many an ill-advised bill introduced into Parliament has met its fate through the efforts of the Association's Parliamentary Committee—a service which must be appreciated not only by the manufacturers of Canada, but by the Governments as well. As a proof of the wisdom shown in this department it may be stated that with one or two exceptions during six years' work, the Committee's views have been accepted and endorsed by the legislative bodies of the country.

The Tariff Committee yields second place to no other in the importance of its work, and its success in moulding public opinion. This Committee exercises its functions first of all in reconciling conflicting interests among the manufacturers. Publicly its services are given to create a strong protectionist sentiment throughout the country, and to impress upon the Government the necessity of a sufficient measure of protection for Canadian industries.

The work of the Commercial Intelligence Committee is manifold. It supplies the members (through a comprehensive system of foreign correspondents) with information concerning foreign firms and markets. It conducts a translation bureau for foreign correspondence. It deals with international questions having a commercial interest for the Canadian manufacturer, and perhaps most important, it issues at regular intervals the Canadian Trade Index, which advertises Canadian manufacturers and their products in every country on the globe.

Reference might be made at length to the work of the Reception and Membership Committee, which has in charge the bringing in of new members and the preparations for business dinners and social functions of various kinds. These form a necessary and very helpful part of the Association's work.

This brief review would not be complete without a modest reference to the Committee in charge of INDUSTRAL CANADA, the official organ of the Association. The paper was first issued in July, 1900, and from an issue of four pages has grown to its present size, with an ever-increasing influence in its own sphere, and a wide recognition from the Canadian press generally.

Representing an invested capital of more than Four Hundred Million Dollars and embracing all the important manufacturing industries of the country, the Association wields a large influence in the national development. It is a non-political body, and has regard only for the national welfare; and at this stage of the country's growth the watchful interest of business men in national problems means much to the Dominion.

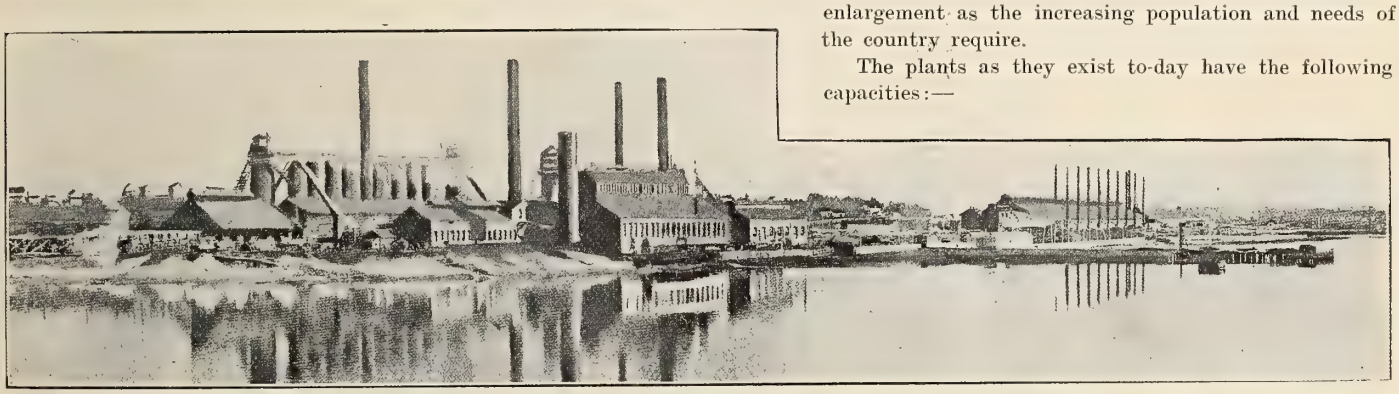
The incompleteness of the review we have attempted in this short article is very apparent when we consider that there are many other Committees with special duties, and many other interesting features of the work which we have been obliged to omit entirely.

Enough has perhaps been said to interest the reader, and a personal call or correspondence with the Secretary of the Association will bring our willing response to any further inquiries our readers may wish to make.

IRON AND STEEL.

The manufacture of iron and steel is one of the latest industries to be established in Canada, chiefly because it did not receive tariff protection as early as most of our other industries. When the protective tariff known as the National Policy was adopted in 1879 the Government of the day, while affording protection to many industries, failed to apply the principle to that industry which is the basis of nearly all others. Prior to 1887 the duty on pig iron was not sufficiently high to be protective and was useful for only revenue purposes. Consequently every attempt to establish an iron and steel industry in Canada ended in financial failure.

Although protective duties and bounties were granted in 1887, the protection was still low, and there was such bitter opposition to the policy that it was difficult to induce capitalists to invest upon a large scale because they feared that a change of Government might result in the abandonment of protection before they could get their works in operation. Then a world-wide depression existed in the iron industry for some years, and prices were abnormally low, so that there was little inducement to invest money in building new works. Notwithstanding these drawbacks the good effects of the new policy were soon seen; works were started on a small scale in Nova Scotia, Quebec and Ontario, and the industry gradually developed.



Panoramic View of the Works of the Dominion Iron and Steel Co., Sydney, C.B.

When the Liberals came into power they wisely decided to adopt the Conservative policy of encouraging the iron industry, and although they somewhat lowered the customs tariff they increased the bounties. The fact that both of the Canadian political parties had accepted the principle of protection for the iron industry gave confidence to capitalists and this assurance of a permanent policy coming at a time when the demand for iron and steel was reviving all over the world, attracted a considerable amount of capital for investment. The development of an iron industry in a new country is a slow process in its early stages. Mines must be opened, ore, fuel and flux tested and transportation provided. The works are costly and it takes a long time to build them. However, the Canadian iron and steel industry seems to have passed the experimental stage, and great developments may be expected in the future. The tariff protection is not yet adequate, and the bounties are decreasing, but there is reason to believe that the Government has decided to increase the protection at the next session of Parliament, and if this is done a bright future for the Canadian iron and steel industry is assured.

THE DRUMMOND GROUP.

Among the iron industries of Canada there is no more comprehensive group of allied enterprises than those planned and carried into successful operation in the Provinces of Ontario, Quebec and Nova Scotia, by the well-known firm of Drummond, McCall & Co., iron and steel merchants and manufacturers, of Montreal, and their associates, prominent among the latter being Mr. Edgar McDougall, of the John McDougall Caledonia Iron Works, Montreal.

While the head offices of the different companies forming this organization are centered in Montreal, yet the works are located at strategic points throughout the three Provinces mentioned, the locations being chosen with a view to the proximity of raw material, and an immediately accessible market for the products, a main factor in the selection of sites being economy in railway and vessel freights, in the handling and delivery of raw material inwards, and products outwards to consumers, a very important consideration where heavy material has to be delivered in a country covering as great an area as the Dominion of Canada.

The works are all constructed with a view to extensions and enlargement as the increasing population and needs of the country require.

The plants as they exist to-day have the following capacities:—

Producing Plants.

Canada Iron Furnace Co., Ltd—

In Ontario.—The Midland Blast Furnace.
Product—Foundry, Bessemer and malleable Bessemer pig iron. Fuel—Coke. Ores—Lake Superior hematites. Output—40,000 tons per annum..... 40,000

In Quebec.—The Radnor Forges Blast Furnace.
Product—Special charcoal pig iron for manufacture of car wheels. Fuel—Charcoal. Ores—Local. Capacity—7,500 tons per annum..... 7,500

Londonderry Iron & Milling Co., Ltd., Londonderry, N.S.
Product—Foundry pig iron. Fuel—Coke, from local coal. Ores—Hematites and limonites, from company's own immediate property. Capacity—40,000 tons per annum..... 40,000

John McDougall & Co's Furnace, Drummondville, Que.
Product—Special charcoal pig iron. Fuel—Charcoal. Ores—Local. Capacity—3,500 tons per annum..... 3,500

91,000

Consuming Plants.

Canadian Iron & Foundry Co., Ltd.
Car wheel contractors for the Grand Trunk Railway System of Canada, the Michigan Central Railway

Company in Canada, and the Père Marquette and Wabash Railways in Canada.

In Ontario.—Hamilton (Ont.) Works.

Product—Railway car wheels and high grade machinery castings. Output Capacity—Car wheels, 12,000 tons per annum; castings, 4,500 tons per annum..... 16,500

St. Thomas (Ont.) Works.

Product—Railway car wheels and iron and brass castings of all kinds. Output Capacity—Car wheels, 12,000 tons per annum; Iron castings, 7,500 tons per annum..... 19,500

Brass Castings—300 net tons.

Montreal Pipe Foundry Co., Ltd.

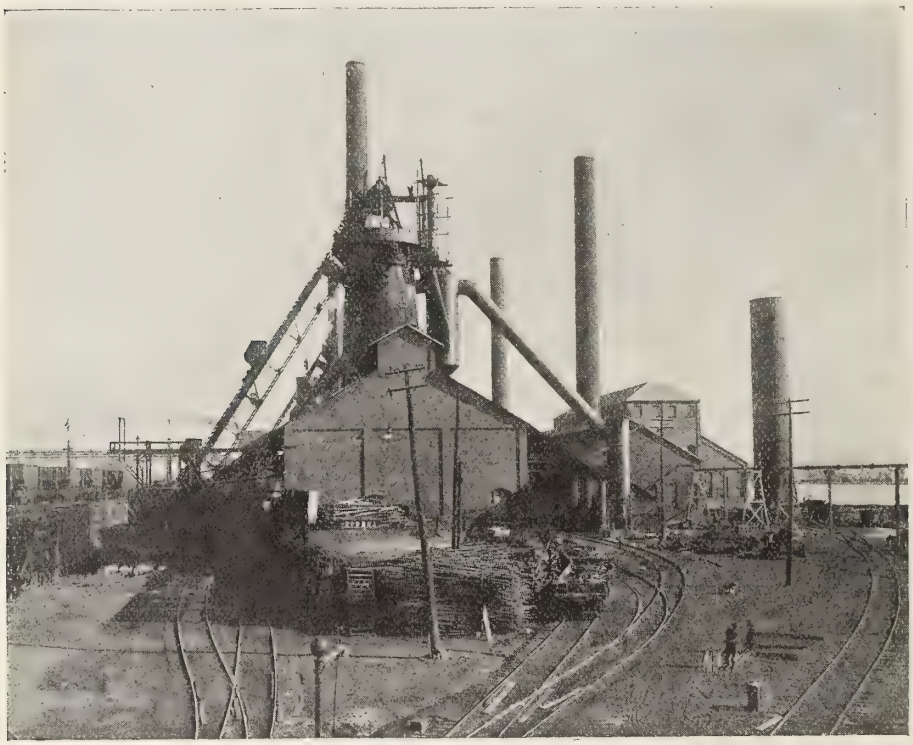
Manufacturers of cast iron water and gas pipes and special castings for general foundry and machine work.

In Quebec.—Three Rivers (Que.) Works.

Output Capacity—Cast iron pipes, 10,000 tons; castings, 6,000 tons..... 16,000

In Nova Scotia.—Londonderry (N.S.) Works.

Output Capacity—Cast iron pipes, 10,000 tons; castings, 6,000 tons..... 16,000



Blast Furnaces, Dominion Steel Co.

John McDougall & Co., Drummondville, Quebec.

Manufacturers of railway car wheels and castings.

Capacity—Car wheels, 9,000 tons; castings, 7,500 tons. 16,500

Total present annual capacity in railway car wheels, iron castings and gas and water pipe..... 84,500

In brass castings, 300 tons.

In the operation of all these works some 2,700 to 3,000 men are regularly employed.

The properties of the companies in the various provinces are most valuable, and are capable of development to sustain a very much greater business than the immediate requirements of the country demand, so that there is plenty of room for legitimate expansion. Special reference to some of the properties will be of interest:—

The Canada Iron Furnace Company, Limited, Midland, property is situated on the water front of Midland harbor, Georgian Bay, now a pivotal point for the grain shipments from the Canadian North-West, to the sea-board. Midland is the transhipping point for the wheat coming over the Grand Trunk Railway system, and more wheat went through Midland last year than through the harbor of Buffalo, N. Y. It is a matter of public knowledge that the Canadian Pacific Railway are planning an entrance to Midland, with a view to making it also their grain port on the Georgian Bay. The importance of the Canada Iron Furnace Company's property at this port will be realized when it is noted that they own and control over one-half of the harbor front, with terminal railway, and have already built a system of docks extending over several acres, with deep water (22 feet 6 inches) at their wharves, enabling the largest vessels to discharge their cargoes of iron ore (from Lake Superior mines) right alongside of the furnace. The Company's plant, built three years ago, is up-to-date in every particular, and with ample property (owned in fee simple) for all future necessary extensions.

This company's property at Radnor Forges, Province of Quebec, includes, in addition to the blast furnace plant, the Village of Fermont, with workmen's cottages, general stores, etc., large areas of hardwood lands, from which the necessary cordwood is taken for the manufacture of charcoal in the company's batteries of kilns at Radnor, Grandes Piles, Lac aux Sables, Lac Pierre Paul and St. Thecle. The company controls some 100,000 acres of bog ore bearing lands in the Province of Quebec, and owns the Radnor magnetic iron mine in Renfrew County, Ontario; important water power at Grandes Piles, Quebec, limestone quarries, railway sidings and other valuable properties.

The Londonderry Iron & Mining Co., Ltd., has perhaps the most important proved iron property in Eastern Canada, comprising as it does 30,000 acres of freehold land, held in fee simple, upon which exists most important iron mines, now under development, extending over a range of hills some twelve miles in length, the property being also a most important one in respect to the possession of a valuable growth of spruce and hardwood, the spruce covering 13,000 acres, and the hardwood 9,000 acres. The ores (hematite, limonite and specular) have been thoroughly proved in furnace practice. They are very low in sulphur and phosphorus, and absolutely free from titanium. The company's mines are connected with the furnace plant by means of an extensive system of standard gauge and narrow gauge railways, with up-to-date rolling stock, which are owned and operated by the company itself, thus minimizing the cost of transportation. The furnace plant is thoroughly up-to-date, the furnace itself being water-jacketed and thoroughly modern in equipment. The plant includes most efficient types of hot blast stoves, blowing engines, hoisting engine, steam pumps, stone and ore crushers, charging scales, slag cars, etc. The product (foundry iron) is of the very highest quality, and finds a ready sale not only with the allied industries, but from general consumers throughout the Provinces of Nova Scotia, Quebec and Ontario. The fuel used is coke, made by the company itself in its own ovens and washing plants. All of the company's properties are under capable management, the directorate being formed of men who have had long experience in the iron and steel trade of Canada, being practically the pioneers in the business. The superintendents in the various departments are men who have been carefully trained, and are thoroughly efficient in their work. Such a combination in control of properties of proved merit can be relied upon to carry that section of the Canadian iron industry to

which they are devoting their special attention to a successful issue, worthy of the expanding trade of Canada.

THE DOMINION IRON AND STEEL COMPANY.

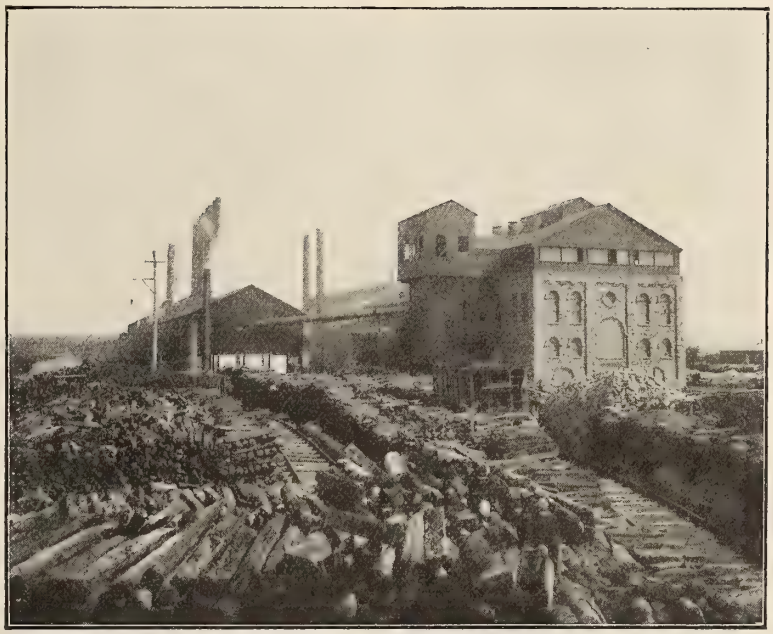
The most extensive iron and steel works in Canada are those of the Dominion Iron and Steel Company, at Sydney, C.B. When running at full capacity the output of these works is as follows:—

Capacity of Plant	Tons per month.
Four blast furnaces	36,000
Ten open hearth furnaces	20,000
One blooming mill	20,000
One billet mill	18,000
One rail mill	20,000
One rod mill	7,000

However, the four blast furnaces will seldom be all in operation at the same time. The policy of the manager is to keep three furnaces always in blast and one ready to go into use when any one of the three requires repairs.

There are at present 450 by-product coke ovens. As they require from 40 to 48 hours to make coke suitable for blast furnaces from the Cape Breton coals, which are high in volatile matter, they do not produce enough coke for the three blast furnaces. Consequently only two of the blast furnaces have been in operation for some time past, but additional coke ovens are now being built and will be in operation before the end of the year.

The works are equipped with the most modern appliances for reducing labor costs, electricity being extensively used.



Blast Furnaces, Algoma Steel Co.

The Site of the Works.

The site of the works comprises 393 acres of land with a deep water frontage of 2,400 feet on the magnificent harbor of Sydney, C. B., which is only 2,282 miles from Liverpool, 5,110 miles from Buenos Ayres and 6,467 miles from Cape Town, whereas Pittsburg, the great steel centre of the United States, is 3,514 miles from Liverpool, 5,643 miles from Buenos Ayres and 7,224 miles from Cape Town. Pittsburg is an inland town, and the distances given above are partly by rail and partly by water, while the products of the Sydney mills can be loaded at the works on to the largest ocean vessels and shipped direct to any seaport in the world.

The Raw Materials.

Nearly all the iron ore used by the Dominion Iron and Steel Company is brought from the Wabana iron mine owned by the company on Great Bell, a small island in Conception Bay, Newfoundland, about 400 miles from Sydney. This ore bed has an average thickness of eight feet, extending over 817½ acres, and is estimated to contain over 28,000,000 tons of available ore on the island, besides the areas under the sea, which are believed to be very extensive. The ore is red hematite and contains about 50 per cent. of iron. It is low in sulphur, but rather high in phosphorus. The ore is mined, transported and laid down at the works at a cost of less than one dollar per ton. As phosphorus can easily be eliminated by the open hearth process of steel manufacture, no admixture of other ores is required when the pig iron is to be converted into steel, and Wabana ore is used exclusively for all the pig iron that goes to the open hearth furnaces. From Wabana ore exclusively the company also manufacture a foundry pig iron which is of better quality than Middlesborough, England. However, when a pig iron low in phosphorus is required, low phosphorus ores are mixed with the Wabana ore. For this purpose ore is brought from Cuba, Spain, Sweden and Lake Superior. It has been found that Lake Superior ore can be laid down at Sydney almost as cheaply as at Pittsburg. The distance is greater, but there is water transportation all the way, whereas both rail and water must be used in transporting the Lake Superior ore to Pittsburg. Ore from Spain and Sweden can be laid down at the Sydney works as cheaply as at any works in Great Britain. The fact that the Dominion Iron and Steel works have a frontage on a deep water harbor close to the ocean gives the company a great advantage in the assemblage of any raw materials that are not found close at hand. However, as most of the pig iron produced is turned into steel, the Wabana ore being used exclusively, very little outside ore is required by the company. The limestone comes from the quarries of the company at Marble Mountain on the Bras d'Or Lake, a distance of about 70 miles by water from the works. It is of very fine quality. The coal is obtained from the mines of the Dominion Coal Company, which are only a few miles from the works of the steel company. The Dominion Iron and Steel Company have a contract with the Dominion Coal Company by which they are assured a supply of coal at a slight advance on the cost of mining, for a period of 99 years. The coal being rather high in sulphur, has to be washed before being converted into coke, and the company have a washing plant capable of washing two hundred tons of coal per hour. This coal washing plant is very effective in eliminating sulphur and is giving great satisfaction.

First-Class Steel.

Steel made from Wabana ore alone has been thoroughly tested during the last three years, having been manufactured into boiler tubes, boiler plates, locomotive and car axles, angle plates, wire rods and a variety of other products and has proved exceedingly satisfactory. Before starting the construction of the rail mill a quantity of the steel was sent to England, where it was manufactured into steel rails which stood the severest tests.

THE NOVA SCOTIA STEEL COMPANY.

The Nova Scotia Steel Company has works at New Glasgow, in Pictou County, N.S., and at Sydney Mines, a Cape Breton mining town about three miles from the port of North Sydney.

The raw materials are practically the same as those used by the Dominion Iron and Steel Company. The company owns a bed of iron ore on Great Bell Island of exactly the same character as the Wabana ore. It is estimated to contain about six million tons of ore on the island, and, like the Wabana ore bed of the Dominion Iron and Steel Company, is supposed to extend a considerable distance under the sea. Cape Breton limestone is used, and the coal is obtained from the company's own mines at Sydney Mines.

The Works at New Glasgow.

The steel works at New Glasgow were started in 1883, and have gradually developed. The New Glasgow plant consists of four open hearth steel melting furnaces, two 50-ton and two 40-ton capacity; a blooming mill with all modern labor-saving appliances, which has a capacity of 400 tons of billets per day; one 18-inch bar mill; one 12-inch, one 9-inch and one 20-inch plate mill. The combined rolling capacity of the several mills is between 200 and 300 tons per day. There is also a plant for the manufacture of polished steel bars and cold drawn shafting.

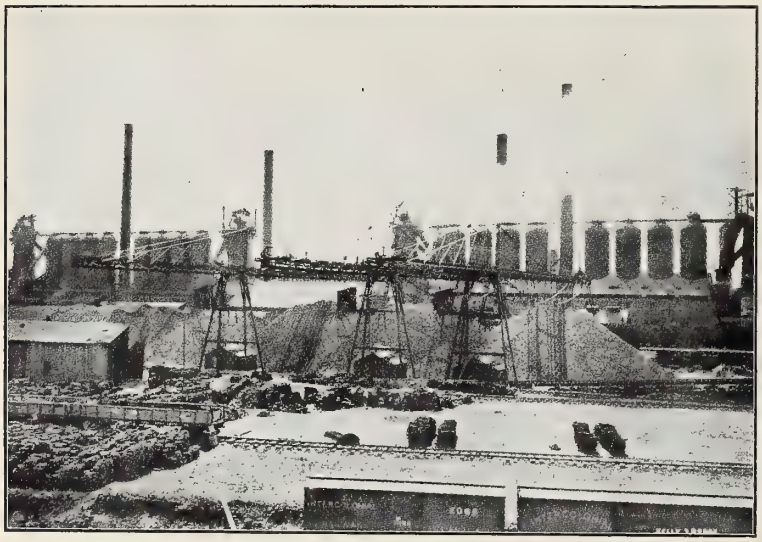
The Works at Sydney Mines.

At Sydney Mines, in addition to the several collieries of the company, which are capable of turning out one million tons of coal per year, there is a modern blast furnace with a capacity of 250 tons of iron per day, a coal-washing plant with a capacity of 800 tons of washed coal per day, and four batteries of coke ovens having a capacity of 400 tons per day.

A new open hearth steel plant is just being completed at Sydney Mines. It consists of four 50-ton open hearth steel melting furnaces and one hydraulic tilting hot pig iron mixer. The capacity of these furnaces is about 2,000 tons per week, using direct metal. The works at Sydney Mines are equipped with the most modern labor-saving devices.

THE ALGOMA STEEL WORKS COMPANY.

The Algoma Steel Company is one of the subsidiary companies of the Lake Superior Corporation, better known as the



Rear View of Blast Furnaces, Dominion Iron and Steel Co.

Consolidated Lake Superior Company. The works are located at Sault Ste. Marie, close to the great power plant of the Lake Superior Corporation. The plant includes two blast furnaces, one coke and one charcoal, two 6-gross ton Bessemer steel converters, and a steel rail mill. The coke furnace has a guaranteed capacity of 250 tons per day, but averages 260 tons daily and has turned out as high as 307 tons in 24 hours. The charcoal furnace is rated at 150 tons per day, but has turned out as high as 156 tons in one day. The rail mill has a guaranteed capacity of 500 tons daily, but it has actually had an output of 650 tons in one day of 24 hours, and the manager thinks it is capable of turning out between 700 and 800 tons of rails per day of 24 hours.

Plants for the manufacture of charcoal containing 20 retorts, with a daily capacity of 160 cords of wood, and 56 bee-hive kilns, with a daily capacity of 180 cords, are operated by the company, the wood being obtained from its own lands in the country back of Sault Ste. Marie. The coke furnace uses Pennsylvania and West Virginia coke. Lake Superior iron ore is used. The supply is obtained principally from the Marquette, Gogebic and Mesaba ranges, but some ore is used from a Canadian mine on the line of the Algoma Central Railway, known as the Williams Mine, which has responded very satisfactorily in the furnace and is of a very desirable character.

The works being located near the Sault canals, through which an enormous tonnage of iron ore and coal annually passes, are in a very good position to obtain cheap supplies of ore and fuel from any point along the lakes on both the Canadian and American sides.

The steel rails manufactured by the Algoma Steel Company are of high quality. The Canadian Pacific Railway, after a thorough test, ordered large quantities of them and satisfactory tests have also been made on the Government railways.

The Algoma Steel Works have the advantage of being nearer the Canadian North-West than any other Canadian works yet established. The Algoma Central Railway, owned by the Lake Superior Corporation runs through the famous Michipicoten iron district, and will connect with both the Canadian Pacific and Grand Trunk Pacific Railway lines. As the demans for rails in Northern Ontario and the Canadian North-West is certain to be very great the company should have no difficulty in marketing its output.

THE HAMILTON STEEL AND IRON WORKS.

The works of the Hamilton Steel and Iron Company are located at Hamilton, Ont., and have the advantage of being in a manufacturing city that uses a great deal of iron and steel. The capacity of the works is as follows:—

One blast furnace making 75,000 gross tons of pig iron per annum.

Three basic open hearth furnaces making 45,000 tons of steel per annum.

A rolling mill producing 60,000 tons of steel and iron bars per annum.

The coke for the blast furnace comes from the Connellsville region; Lake Superior iron ore is used, about 70 per cent. being Canadian. The limestone is obtained close at hand.

THE DESERONTO IRON COMPANY.

The Deseronto Iron Company have a charcoal blast furnace at Deseronto, Ont., with a capacity of 1,000 tons per month. The ores used come principally from the Lake Superior iron districts in Michigan, Minnesota and Ontario, but a small percentage of ore from North Hastings, Ont., is used. The charcoal is manufactured in Deseronto, and local limestone is used.

OTHER STEEL WORKS.

The above list includes only those companies that manufacture pig iron. The Montreal Steel Works at Point St. Charles, Montreal, have two 15-gross ton acid open hearth steel furnaces. They manufacture steel castings for railway, mining and other purposes, as well as springs, switches and track work for steam and electric roads. The Northern Iron and Steel Company have at Collingwood, Ont., two 20-gross ton basic open hearth steel furnaces with an estimated annual capacity of 36,000 gross tons of ingots. Works are being built at Ottawa for the manufacture of steel by the Hunter process. Estimated annual capacity, 1,500 gross tons of steel castings.

ROLLING MILLS.

While the rolling mill capacity of the manufacturers of pig iron and steel has been mentioned, it is not the purpose of this article to describe the rolling mills of the Dominion. There are a number of rolling mills in Canada, some of them very extensive and having a large output. The rolling mills received tariff protection long before it was given to the manufacturers of pig iron and steel, and consequently this branch of industry has been successfully established in Canada for a number of years.

MACHINERY.

An industry that is itself dependent on the other manufacturing industries is that devoted to the manufacture of machinery. The Canadian machinery industry, while it leaves considerable room for development, is relatively a very important one from the standpoint of capital invested, hands employed and annual output, comprising as it does some of the most extensive plants in the country.

Excluding engines and boilers and electrical machinery, which will be treated elsewhere in separate articles, the following statistics, taken from the census of 1891 and 1901, will give an idea of the extent of the industry. It may be pointed out that the lines really included in the scope of this article come under the heading of foundries and machine shops. But as the other items comprise various branches of the metal-working industry which are more or less closely allied, they can be more conveniently mentioned in this connection than elsewhere. It is necessary to explain also that the difference in the figures for foundries and machine shops between 1891 and 1901 does not represent the true growth of the industry, as the 1891 figures included establishments employing less than five hands, which were excluded entirely in the last census, making a very considerable deduction in this particular branch of manufacturing.

Statistics of Machinery-Making Establishments and Allied Industries in 1891 and 1901.

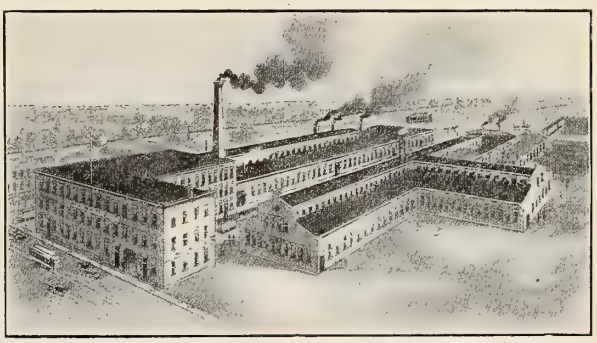
		No. of Establishments.	Capital.	No. of Employés.	Wages.	Value of Products.
Brass Fittings	1891	11	$ 629,550	594	$ 261,480	$ 750,500
	1901	23	1,145,403	811	325,574	1,099,557
Cutlery and Edge Tools	1891	27	1,150,932	758	332,372	987,504
	1901	28	1,485,932	1,239	493,233	1,295,980
Foundries and Machine Shops	1891	363	15,866,352	12,028	4,836,598	15,356,052
	1901	315	16,274,645	11,784	4,604,124	15,292,445
Iron and Steel Bridges	1891	6	724,655	444	184,300	728,075
	1901	6	1,755,379	797	318,404	1,693,000
Iron and Steel Products	1891*	..	.....	....	.....	.....
	1901	29	9,829,560	4,110	1,693,542	6,912,457
Nail and Tack Factories	1891	11	407,340	404	151,900	743,100
	1901*	..	.....	....	.....	.....
Pumps and Windmills	1891	14	207,585	141	55,709	222,052
	1901	17	739,737	478	171,164	733,150
Printing Presses	1891*	..	.....	....	.....	.....
	1901	5	541,064	295	104,404	362,135
Rolling Mills	1891	6	2,307,540	2,006	843,500	3,163,930
	1901*	..	.....	....	.....	.....
Safe and Vault Works	1891	4	172,000	202	78,600	202,500
	1901	3	232,610	158	71,200	225,200
Saw and File Cutting	1891	13	450,350	321	136,172	521,380
	1901	7	419,534	230	99,500	314,312
Scale Factories	1891	7	177,600	122	45,500	164,800
	1901	8	279,414	194	85,211	285,240
Screw Factories	1891	2	512,189	169	65,100	19,800
	1901	4	714,586	242	90,246	385,810
Sewing Machines	1891	6	936,485	884	291,983	775,670
	1901	3	1,110,167	619	275,774	752,308
Washing Machines	1891	5	75,045	108	37,660	134,540
	1901	6	128,673	164	46,818	179,434
Wire Works and Wire Fencing	1891	20	915,000	814	310,093	1,884,100
	1901	29	1,825,068	705	241,140	2,030,465

Excellent proof of the high standard of quality attained in Canadian machinery may be had on reference to the blue book. If our manufacturers, though in their infancy, so to speak, can, besides attending to the needs of the home market, export machines to foreign countries in competition with the largest manufacturers of the United States, Great Britain and Germany, then their products must be recognized as equal to the best. The following table of last year's exports shows that Canadian machinery is shipped to all quarters of the civilized world, and that the total has reached no mean proportions:—

* Figures not available.

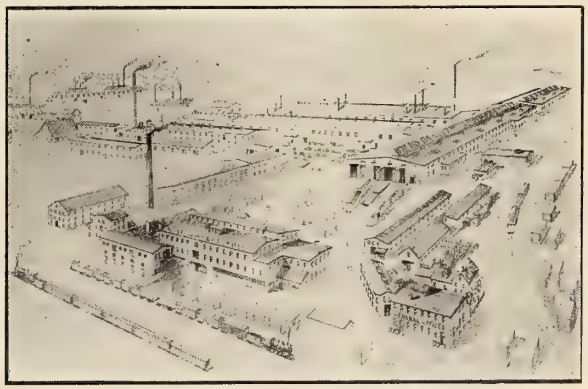
Exports of Canadian-made Machinery, 1904.

Great Britain	$99,765	Cuba	$ 3,013
United States	84,081	Holland	2,784
Australia	55,846	Mexico	2,671
Newfoundland	40,455	Spain	2,196
British Africa	22,799	Italy	1,991
Germany	7,396	U.S. of Colombia	1,685
British East Indies	4,415	Other Countries	13,631
Chili	4,025		
Greece	3,287	Total	$350,040



CLARE BROS. & CO., LTD., PRESTON.

Naturally the making of machinery is one of the last industries to be developed in a new country. This, no doubt, is the reason why several kinds of machinery are not yet made in Canada. Nevertheless, some of our machinery manufacturers can date their commencement in business more than half a century ago, such, for example, as the firm of The John Bertram & Sons Co., Limited, of Dundas, Ont., and the MacGregor, Gourlay Co., Limited, of Galt. Both of the concerns mentioned may well be called veterans in the machinery trade, and both are leaders to-day, having kept always abreast of the times.

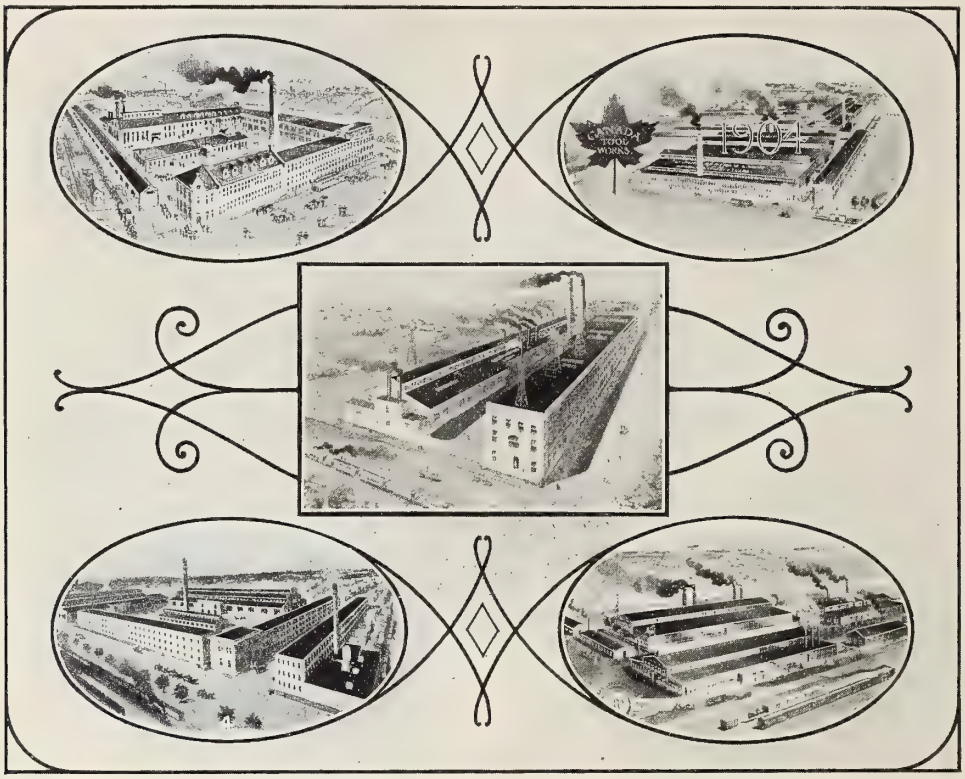


RHODES, CURRY & CO., LIMITED, AMHERST.

In stating that Canadian machinery is second to none, some explanation is necessary. It is not intended to imply that our machinery is as highly specialized in all lines as United States machinery. In that country many special machines are turned out which are not made at all in Canada, as the demand for them here is not sufficient to warrant the erection of plants or the installation of the necessary machinery. In the aggregate, such machines form a considerable portion of our imports. Again, certain of the standard lines are produced in such enormous quantities in the United States that their cost has been reduced

to a very low figure, with the result that competition from this source is felt in Canada in spite of the tariff. These machines, however, are not superior in quality to the Canadian product.

In respect to styles Canadian machinery occupies a position midway between the English idea of durability and the United States idea of efficiency. The result is a combination of the good points of both. Up-to-date United States patterns are followed almost exclusively, but our machinery is built upon somewhat heavier lines, though not so heavy as the British. The combination is very suitable to the needs of a country where manufacturing is not conducted upon so large a scale as in the United States and where manufacturers are consequently not so ready to abandon old machines to adopt new ones slightly better.



Some Typical Canadian Machinery Plants.

1. The MacGregor, Gourlay Co. Ltd., Galt. 2. The John Bertram & Sons Co. Ltd., Dundas.
3. The Goold, Shapeley & Muir Co. of Brantford, Ltd., Brantford.
4. The Lodge Manufacturing Co. Ltd., Toronto. 5. The Jenckes Machine Co. Ltd., Sherbrooke.

A factor that is bound to exert a very beneficial influence on the machinery industry in the future is the development of the Canadian iron and steel industries. This subject is treated under another heading. When Canada can produce pig iron as cheaply as the United States it will mean a saving to Canadian manufacturers of machinery of from $5 to $6 a ton. At present most of the finished steel is imported from the United States and is subject to a duty of $2.00 per ton.

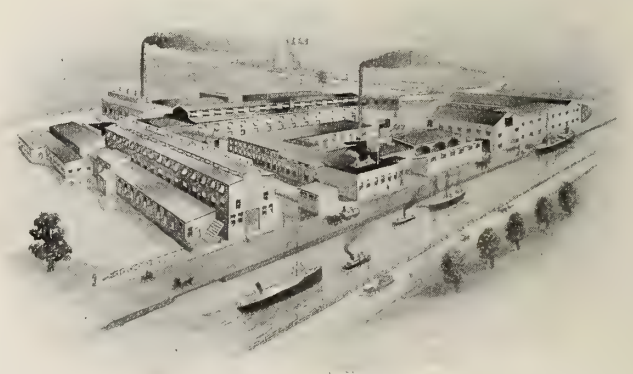
Wood-working and Mining Machinery.

The chief development has been in the direction of wood-working machinery. The lumbering industry, with its allied trades, such as the planing and shingle mill industries, require an immense amount of machinery, nearly all of which is supplied by home manufacturers. The demand, too, is increasing steadily. Saw mills are being started in newly-developed parts of the country, particularly Northern Ontario and Quebec, the North-West Territories and British Columbia. The running of new railway lines into wooded districts is helping very materially in the development of these industries. The establishment of factories in almost every section of the country to manufacture various lines of woodenware and wood products, such as furniture, brushes, staves, wooden pails, is still further increasing the demand. Foundries and machine shops, of which there are a great number scattered throughout the Dominion, are also large buyers of machinery. Particularly is this true of machine tools, a prominent machinery firm being authority for the statement that business in that line has doubled during the last two years.

The rapid expansion of the mining industry in every section of Canada, from the coal deposits of Cape Breton to the gold areas of the Yukon, has created a strong demand for mining machinery of all classes. There is a constant call for dredges, as well as for the equipment of new plants for the drilling, hoisting, crushing, smelting and reducing of the various kinds of ores. No smelting nor reducing machinery is manufactured in Canada, as in order to foster the mining industry this class of machinery is admitted free of duty. Dredges, however, of great strength and efficiency are made in Canada, also large quantities of other kinds of mining machinery such as air compressors, rock drills, and hoists.

Canada is lacking in plants for the manufacture of machinists' sundries, such as gauges, scales, callipers, etc. As a consequence United States firms control the Canadian markets. There is no reason why these lines should not be manufactured in Canada, and very probably factories will be started in the near future.

In conclusion it may be said the outlook for the Canadian machinery industry is exceedingly bright. So far very creditable progress has been made, and as manufacturing in Canada expands and the cost of raw material is lowered, the evolution of the machinery industry will be completed. From the production of standard machines our manufacturers will proceed to the making of highly specialized machines and the finest class of machine tools and sundries. In the meantime the raising of the duty to 35 per cent. is an urgent necessity, and it is confidently expected that this will be one of the first matters to receive attention by the tariff commission proposed by the present Government.



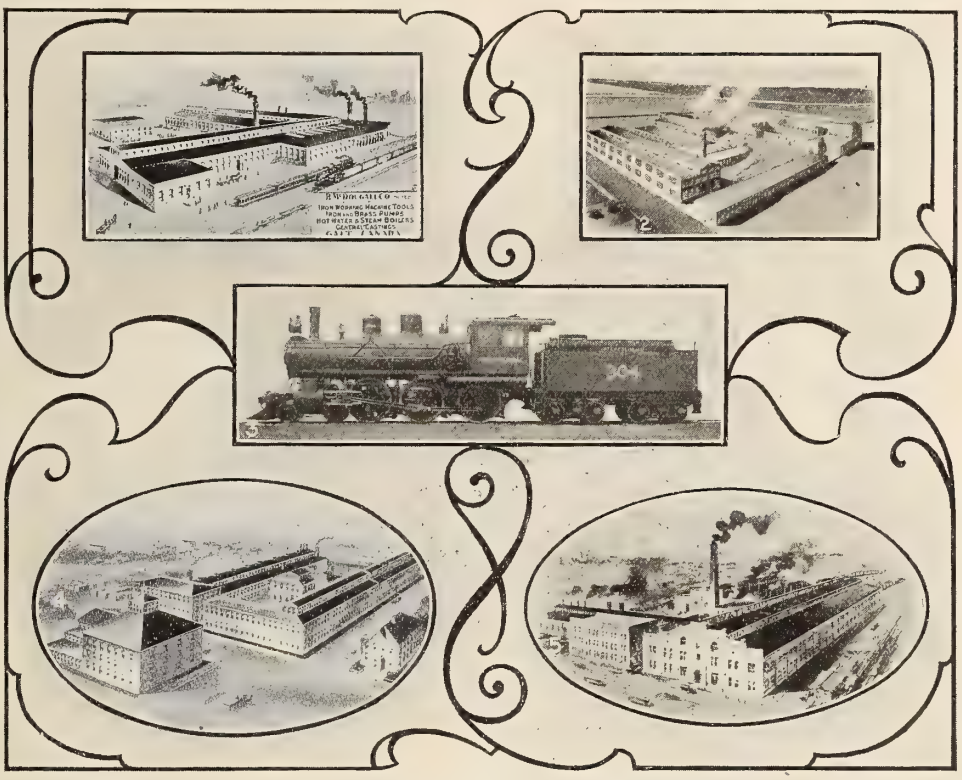
Welland Vale Mfg. Co., Ltd., St. Catharines.

ENGINES AND BOILERS.

A certain Canadian boiler-maker has in his memory one well-defined sensation belonging to his boyhood days. This he had when standing beside a portable sawmill in the woods, watching an 18-h.p. engine drive the circular saw through an elm log. From that day on he wanted to be an engineer.

A few years before that he had another sensation. It was when he saw the first engine ever drawn by a team of horses in that township set at a farmer's stack-yard, where it blew a whistle and called fifteen farmers with pitchforks to help thresh out a group of stacks. This engine was a vertical boiler of 14 h. p., the only threshing engine in the township. Previous to that year the threshing for that township had been done by a horse-power—four teams of horses going in a circle, threshing through a small separator not more than 400 bushels of grain in a day.

In a general way the development of engine and boiler-making in Canada has been marked, and to some extent epitomized, by the sawmill and threshing engine. For these, with a few locomotives, were the chief part of this industry in the country less than half a century ago. The motive power of Canada in those crude days was largely horses, wind and water and "elbow-grease." The windmills were to be seen on many an old mill in the earlier times. Water-wheels were still more common. When a miller was able to afford a steam-engine in his saw and grist mill he was considered a revolutionist.



1. The R. McDougall Co. Ltd., Galt. 2. Robb Engineering Co. Ltd., Amherst.
3. Made by The Canadian Locomotive Co. Ltd., Kingston.
4. The Goldie & McCulloch Co. Ltd., Galt. 5. The Waterous Engine Works Co. Ltd., Brantford.

One of the earliest, though not the first form of this engine was the portable. This is still to be seen in many a north country woodland, following up the forests and leaving behind its trail of sawdust heaps. In central Canada they were quite as common if less numerous, years ago. They were little more than a large threshing engine. From that to a stationary 50 h.p. engine, with the boiler in one room and the fly-wheel in another was a big step in development.

This old stationary engine, whether found in a sawmill or a factory, was of a most primitive type, generally known as the plain long stroke. The earliest specimens were never in a hurry. They had one cylinder each, and that was 36 inches by 24. High speed with these old long-distance punchers was impossible. Fortunately the age was as slow as the engines, perhaps a little slower. At any rate it was much faster running a sawmill with one of these than by horse power.

But the age began to acquire more speed and the engine was improved to correspond. The demand for lumber was too keen to wait for the old long stroke engine, wasting a large percentage of its steam, to furnish the motive power. Out of this necessity arose the plane short stroke. This by way of economical utilization of steam and expansion was a big advantage. From it developed the automatic compound engine with two or more cylinders and a long stroke. These again evolved into the automatic short stroke, with as many as four cylinders and a maximum of both power and speed, such as are used in large factories and steamboats all over industrial Canada to-day.

With this evolution in motive power, and economic utilization of steam, has come a corresponding progression in cheapness.

The more complex, automatic and efficient high-speed engines became, the less their proportionate cost. There was once a time in this country when the scale of cost was $100 per h.p. This has been reduced in the modern engine to a maximum of $25 per horse power, and a minimum of less than $15. This fact, more than any other one, suggests the immense development in Canadian engine-making denoted by the following comparative figures:

Boiler and Engine Making in Canada.

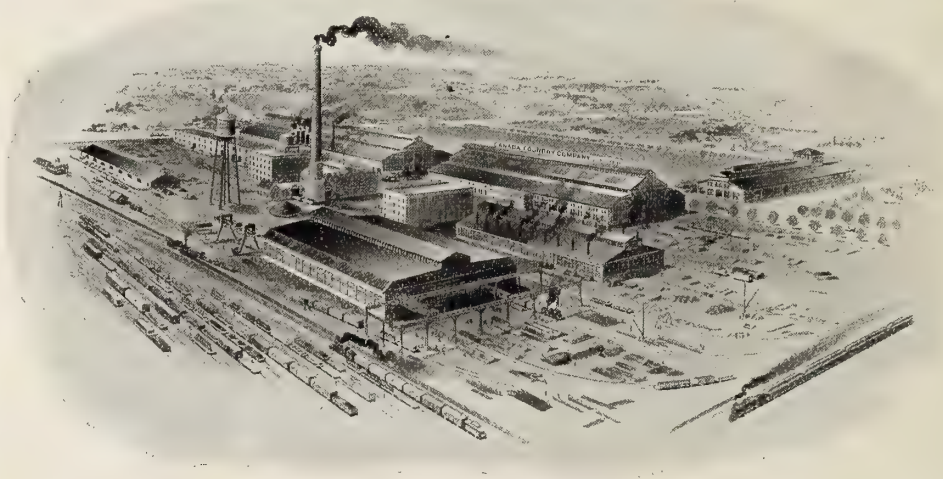
	No. of Establishments	Capital	Hands	Wages	Value of Production
1891....	42	$ 635,934	1,691	$ 690,775	$2,438,878
1901.....	59	5,552,862	3,713	1,565,309	4,626,214

What is the cause of this development typified by an evolution of cheapness? Not the price of labor, for that has increased. Not the price of raw material, for that has also increased. Obviously and necessarily in the development of a local demand. The practical abolition of horse power and the necessity for high-speed engines in all sorts of factories has created an enormous demand for high-power, high-speed engines and a concurrent demand for steam engines of all types. With a large volume of business the manufacturer has been able to reduce his individual profits on an engine. He has also been both required and enabled to add to his own plant in order to cope with the modern

demands for improved motive power. Hence it is that in ten years the number of engine-making concerns in Canada has increased more than 70 per cent., and the capital invested more than 800 per cent. Hence it is that in one large works in Toronto may be counted 1,200 men manufacturing engines, boilers and machinery from pig iron and steel into finished products.

Following along with the development of mechanism in the engine has come an evolution in both safety and speed of manufacture and of cheapness in the making of boilers. Practically gone are the old hand rivetters pounding drearily with their sledges, and in their place has come the huge rivetting machine, doing the work of a score of men at a single blow and doing it more precisely. Automatic devices have been multiplied in engines to cope with the modern necessity of continuous work at high speed, a maximum of conserved energy, with a minimum of wear and tear and of man labor. Where it formerly required one man to run a 20-h.p., and kept him busy oiling, turning taps and stoking, two or three men now are able to run an engine twenty times as big and doing thirty times the work with half the wear and tear, and less than half the time wasted for repairs.

In the old days the sawmill gangs expected regularly about one day in three weeks to lie off while the engineer tinkered at the engine or cleaned out the flues. The modern engine made in a Canadian engine works is not built to give the hands time to rest. It is a huge mechanism as complete and as economic as anything of its kind on the continent, and, for that matter, in the world. Economy is its motive principle. The maker of it imports scarcely anything in the way of manufactured parts, although it is still necessary to import pig iron and steel as raw material, owing to the infantile condition of the iron and steel industries of Canada. So that here and there throughout Ontario may be found a little town which is known far and wide for its manufacture of engines and boilers, as distinctively as Birmingham is noted for its iron works and Sheffield for its cutlery. That Canadian users of motive power do not need to go abroad for it, and that importations of steam engines and boilers are not forging ahead in spite of a general tariff of 25 per cent, and a preferential tariff of only 16⅔ per cent., is shown by the following figures:—



Canada Foundry Co., Ltd., Toronto.

Canadian Importations of Engines.

	1902.	1903.	1904.
Locomotives	$611,925	$1,220,328	$2,431,220
Portable	261,188	542,315	485,598
Steam and Boilers	382,022	470,780	466,919
Gasoline		137,014	127,851

These figures, it will be noticed, indicate a 400 per cent. increase in locomotive importations in three years; less than 200 per cent. in portable engines, with a decline in 1904 of about 11 per cent; a fractional decline in 1904 in steam engines and boilers and the same in gasoline engines. Compared to the figures given for the manufacture of engines and boilers in Canada it will be seen that the total importations for 1902 were just about one-third the total Canadian manufactures for 1901.

In the manufacture of locomotives, Canada is forward in progress. This is a land of vast railways, and the railways are now a larger factor in industrial development than ever before in the history of Canada. For more than half a century Canada has been making locomotives. The first were built in Toronto in 1851 for the old Northern Railway. The first of all was built by hand in an old shop up town, and pinch-barred on planks a quarter of a mile down to the track. This operation took several days. About the same time locomotive works were established in Kingston and Montreal. These have since developed into mammoth concerns turning out 200 locomotives every twelve months. The repair shops alone for one division of the Grand Trunk employ 1,000 hands, with a necessity for immediate enlargement. Toronto works also have begun again to enter the locomotive field. Less than a year ago one of the largest foundry and engine works in Canada installed a locomotive plant, taking orders at once for 11 engines of 125 tons weight for the Canadian Pacific Railway Company. This, as yet an infantile industry, is expected to develop with the evolution of railway building in Canada. Importations of locomotives are now largely of the heaviest types, for use on steep grades and long hauls. But at the present rate of development it will be but a matter of time till Canada is able to dispense with importations altogether.

Threshing engines have developed only less rapidly because the limit of perfection has been sooner reached. A notable feature of this branch of the industry, which is the work of several large firms turning out hundreds yearly, is the abolition of the old stand-up boiler. Another is the increase in size and power, caused by the demands of the modern mammoth separator with its thousands of bushels daily capacity and its straw blower. Another still is the traction engine which has largely superseded the horse-drawn engine in many parts.

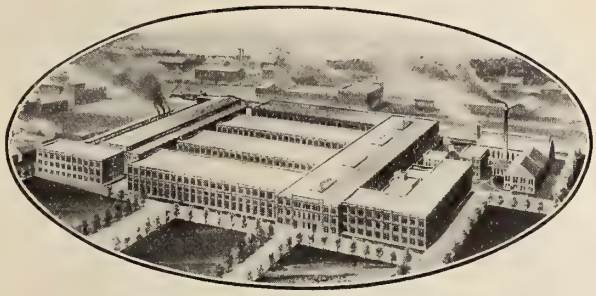
Gas and gasoline engines, too, have become a pronounced recent feature of the industry. This department has developed with amazing rapidity in Canada, following the recent vogue of gasoline the world over. Of this Canada has taken up her share. Canadian works now manufacture the most modern gasoline engines for factories, mills and motor boats, as well as gas engines of increasing size and power. A feature in this connection is the present making of an engine in Toronto able to manufacture its own gas from coal and to apply it directly as motive power in place of steam. This is the first instance of the kind in Canada, and is the application of a British patent. Underfeed stokers, with the modern facilities for smoke-consumption and a 15 per cent. saving in the cost of fuel are made extensively in Canada. Marine engines and boilers are made of the most modern type, capable of equipping the largest vessels in Canadian lake and river marine.

From this modernized facility for manufacturing motive-power mechanism back to the era when the Canadian boy had a sensation from gazing at a portable saw-mill or a threshing engine in a long step in development. This step may be expected to increase to a stride with the extension of the iron and steel industries in Canada making native raw material more easily accessible.

ELECTRICAL APPARATUS.

The electrical age has dawned in Canada. This country, better than any other, on account of its abundant water-power, is fitted for the application of electricity to power and lighting purposes, and immense strides have been made in that direction. The realms of steam on the one hand, and gas on the other, are being invaded, with the result that a mechanical revolution is being rapidly brought about. Past progress is only a drop in the bucket compared to that which is to come as our peculiar advantages for generating electricity cheaply are fully utilized.

With such conditions it is not surprising that the manufacturers of electrical machinery and apparatus are flourishing.



CANADIAN WESTINGHOUSE CO., LIMITED, HAMILTON.

Their factories are among the most extensive in the country, and their output includes motors and dynamos of the largest capacity, as well as a great variety of fixtures and miscellaneous apparatus. It is significant to note that two of the principal concerns, namely, the Canadian Westinghouse Co., of Hamilton, and Allis-Chalmers-Bullock, Limited, of Montreal, have entered the field within the last two years.

Power Generating and Transmission Plants.

One of the main departments of electrical manufacturing consists of the installation of electric power generating and transmission plants. Canada's great natural advantage in this respect is her almost countless waterfalls, scattered from the Atlantic to the Pacific.

The work of harnessing Niagara has been referred to so often that it is doubtless more or less familiar to all. The writer will simply recall here the fact that by the end of the present year at least one company, with a capacity of 125,000 h.p., will be delivering Niagara power in Toronto, a distance of 78 miles, and in different manufacturing towns throughout Western Ontario. Practically all of the machinery installed in this company's plant was made in Canada. Inside of two years two other companies will be tapping Niagara to about equal extent in each case. Even then the effect will not be such as to impair in the slightest the natural beauties of Canada's greatest waterfall.

If it were possible to transmit electric power profitably for long distances there is no telling how great would be the development of power works at Niagara Falls. Probably the whole of Canada might be supplied from it with electricity. However the numerous waterfalls throughout Eastern Canada and British Columbia are so well distributed that every section in those districts, at least, can be supplied with local power. To serve the City of Montreal, a large plant has been installed at Shawinigan Falls, some 86 miles away.

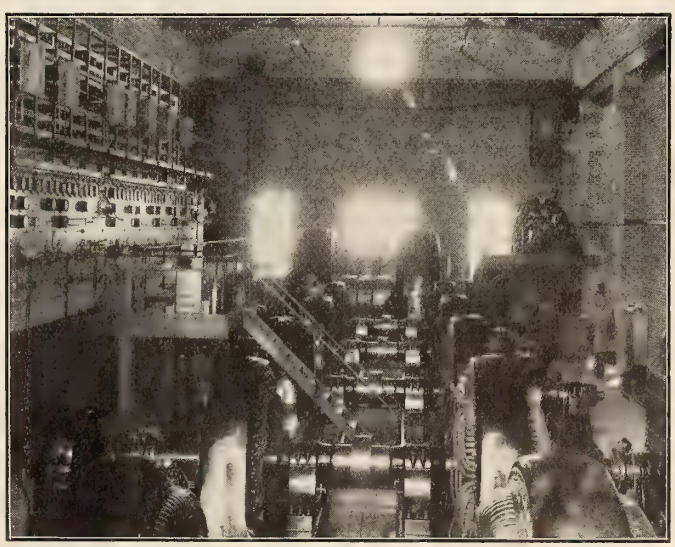
It may be noted in passing that not a country in the world has so many and such immense water-powers as the Province of Quebec. These may be counted by the dozen; waterfalls capable of developing from 25,000 to 75,000 h.p., and there are several that exceed 450,000 h.p. The Great Falls of the Hamilton River are 302 feet high, and, regard being had to the volume of the river's water at this point, it is calculated that this fall is capable of producing a motive force exceeding one million h.p. What a field here for the installation of electrical power generating machinery in the future.

Following on the development of electrical power, and, in fact, its main object, comes the increased use of this power for manufacturing purposes. Cheap power has already stimulated manufacturing in certain places, such as Hamilton, Ont., and, as intimated above, it will soon be available throughout the western part of the province, a very important manufacturing district. Factories situated near distributing points will avail themselves of electric current for lighting and power, instead of putting in steam plants and illuminating by gas, as formerly. Factories of the larger class not adjacent to the lines of power companies will install electric plants of their own—many of them have done so already—and distribute power to the various tools by electrical means.

All this, of course, means a wide demand for motors and electrical appliances. The electrical manufacturers have specialized in this department with the result that their motor machinery is of a very high type.

Electric Lighting.

The field for electric lighting in Canada is increasing by leaps and bounds. For street lighting, even the smallest hamlets are taking up the question of providing electric light, and if appearances count for anything it will not be long before gas for this purpose will be entirely supplanted. For the lighting of large factories, public buildings, and churches, it is becoming almost universal. It is making fast headway, too, for the illumination of private houses, most new houses of any consequence in the cities and towns being fitted with electric light.



8,000 H.P. SYNCHRONOUS MOTOR GENERATOR SET, IN THE MONTREAL TERMINAL STATION OF THE SHAWINIGAN WATER AND POWER CO.

The result of this development is a growing demand for dynamos, lamps and all kinds of electric lighting appliances. Canadian factories are supplying the entire trade.

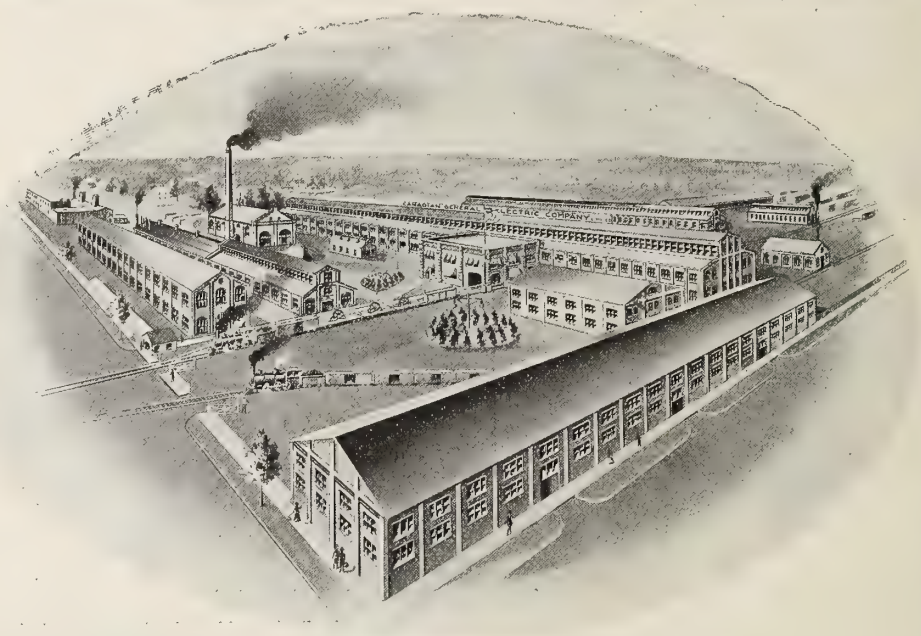
Electric Railways.

There is also great activity in the field of inter-urban electric railways for connecting adjacent towns. To illustrate, no less than five companies are negotiating at the present time for entrance into Hamilton. The mileage of street railways in towns and cities, too, shows a very rapid increase of late years.

Electric equipment for street cars and inter-urban railways is made extensively in Canada, and is equal in quality to the best product of the United States, being manufactured principally from United States designs.

Electricity in Mining.

The well-known pre-eminence of Canada in the matter of mineral resources further points to increased electrical business in connection with the mining, hauling, and treatment of minerals. Electric mining machines, electric locomotives for mine haulage, electric hoists for mine shafts and electric furnaces, are now well known, and are being used by the more progressive mining companies. It may be mentioned that the smelting of ores in electric furnaces is more or less problematical at the present time, but if the process is proved commercially feasible it will lead to the development of many iron ore deposits in different parts of Quebec and Ontario that otherwise could not be profitably exploited on account of the cost of transporting fuel to the blast furnace. The great number of rivers and waterfalls in these districts where electric energy may be developed at a comparatively small cost, was the incentive to the Government in sending recently a commission to investigate the process in Europe.



Canadian General Electric Co., Limited, Peterborough.

One or two of the leading electrical manufacturers are devoting special attention to the sale of electric mining machinery. These concerns have complete facilities for turning out any kind of machine required.

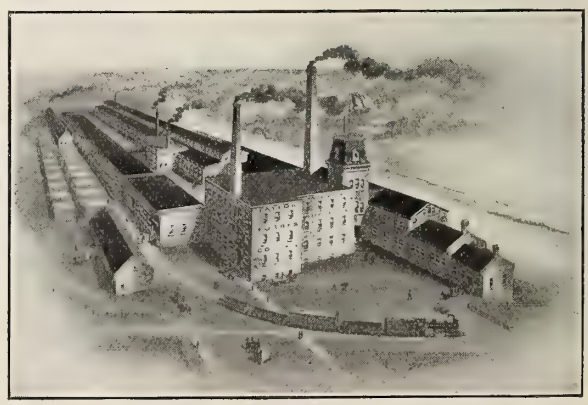
Manufacturers of Electrical Goods.

In order to give a more definite idea of the extent of electrical manufacturing in Canada, special reference may be had to a few of the leading concerns. The three largest are the Canadian General Electric Co., with works at Peterboro', Ont., the Canadian Westinghouse Co., located in Hamilton, and Allis-Chalmers-Bullock, Limited, of Montreal. The combined capital of the "big three" is $8,700,000, and they employ a total of 2,500 hands. Other concerns, who are doing a good business, are the Jones & Moore Electric Co., of Toronto, the United Electric Co., of Toronto, the Electrical Construction Co., of London, and the Packard Electric Mfg. Co., of St. Catharines.

The Canadian General Electric Company was formed first by a group of Canadian capitalists. In its earlier days difficulty was found in producing designs equal to those of United States competitors, as it was impossible to secure the best designers for the salaries paid in such a limited market. The difficulty was overcome by forming an agreement with the American General Electric Company to use its designs on license, and today this arrangement is carried out. Last year, on a capital of $3,000,000, the company earned net profits of $582,519.60, and from January 1 to March 5 of 1905, closed contracts amounting to $1,007,000, making the total year's business about $4,000,000. The directors decided recently to increase the capital stock to $5,000,000.

The Canadian Westinghouse Company is controlled by the Westinghouse Mfg. Company of the United States, is capitalized at $2,500,000, and employs a total of 1,100 hands in its factory at Hamilton. It manufactures and sells the following lines of electrical apparatus: electrical apparatus for power and lighting, including long distance transmission of power; electrical equipments for steam railroads and inter-urban and street railways, including electric locomotives; electrical equipments for mines, including hoists and locomotives; electrical equipment for factories, including electric machine tool drive, electrical cranes, etc.

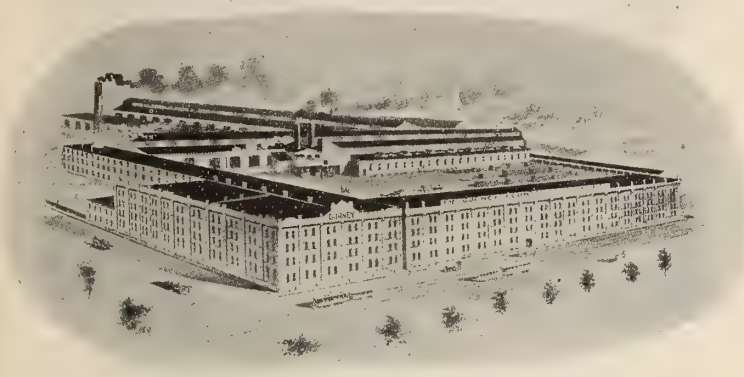
The Allis-Chalmers-Bullock, Limited, of Montreal, is a recent comer established in Canada, with combined Canadian and United States capital. Its works represent an investment of $1,200,000, and the amount of its first year's output was valued at $1,000,000. The company manufactures the various lines of electrical and mining machinery under patents of the Bullock Electric Mfg. Co., of Cincinnati; the Allis-Chalmers Co., of Chicago; the Ingersoll-Sergeant Drill Co., of New York; and the Ledgerwood Mfg. Co., of New York. One of its most important installations has been in the Shawinigan terminal station at Montreal, five 1,200 h.p. frequency changers, one 8,000 h.p. frequency changer, two 900 k.w. 3-phase transformers and two 800 k.w. rotary converters. The chief frequency changer is not only the largest ever built, but is composed of the largest electric motor ever built, and the largest alternating current generator in operation anywhere at the present time.



Taylor-Forbes Co., Limited, Guelph.

HEATING APPARATUS.

After perusing this volume British readers will doubtless conclude that the title "Our Lady of the Snows" is rather a misnomer as applied to Canada. Our pleasant climate in spring and summer is the delight of tourists, and is the basis of rich agricultural resources not excelled in any country. At the same time we are free to admit that while our winters are no longer than in the old country, or, at least, not much so, they are usu-



The Gurney Foundry Co., Limited, Toronto.

ally more severe. This fact is the basis for one of Canada's leading industries, the manufacture of heating apparatus.

To an outsider the summer-like comfort of Canadian homes in winter time is a revelation. Most of the recently built houses, large and small, are heated by furnace, either hot air, hot water, or steam, and thus a uniform temperature is maintained throughout, no matter how fierce may be the winter blasts. Connected with this furnace system of heating special provision is made for ventilation, with the result that Canadian homes are also models of healthfulness.

Practically all of the heating apparatus used in Canada is made by home manufacturers. The only imports of importance consist of stoves in North-West Canada, where high freight rates are somewhat of a drawback to Canadian manufacturers, although they have more than succeeded in holding their own. In fact, the difficulty of Canadian manufacturers at present is not to sell their product, but to manufacture it fast enough to supply the increasing demand. This is a strong proof of the high degree of quality they have attained, considering that they have to labor under certain disadvantages in the cost of raw material as compared with United States competitors, and are protected by the comparatively low duty of 25 per cent.

The evolution of heating apparatus in Canada has been rapid, proceeding from the primitive grate to the stove, stove to hot air furnace, from hot air furnace to steam, direct and indirect. The latest development is that of the central heating system.

Pedigree of the Canadian Stove.

Naturally, the manufacture of stoves is one of the oldest industries in the country, some of the largest manufacturers in the business at present having started in the pioneer days. The first settlers, it is true, used no stoves, but fireplaces instead. They came in most cases from the United Kingdom where the grate system of heating was general, and their houses were log shanties, so small that they could be heated easily from a single fire. But as houses containing a number of rooms were built, the inclement winters soon drove the settlers to the use of box stoves for heating purposes, which then began to be manufactured in Canada. After a time it was found that the box stoves could be used for cooking by setting dishes on top of them, and a new development began.

From the simple box stove a great many different kinds of stoves, furnaces, and other heating systems have been evolved. The number of varieties in the stove line to-day is legion. It is practically impossible to classify them, so diversified are they, and suited to so many special purposes. A few roughly divided classes, however, may be mentioned.

The first is the single cylinder, upright or horizontal, hot blast stove, used exclusively for heating. Formerly these were made of cast iron, but now parts not immediately exposed to the fire are made of pressed steel. The improvement gives a much better appearance and considerably cheapens the price. These stoves do not vary in principle much from the original box stove, and usually burn wood, but they are much more ornamental. They are sold chiefly in the newer sections of the country where furnaces are not desired on account of their greater expensiveness.

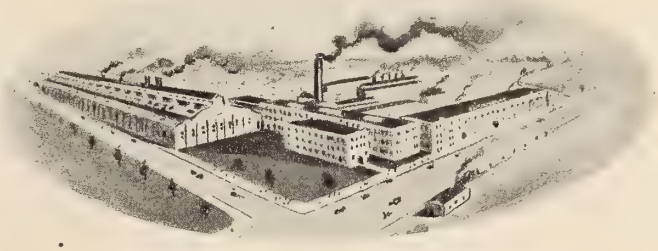
A second class consists of upright heaters for burning coal, of a very highly ornamental type. Until recent years they were extensively used, but like the single cylinder wood stoves, are giving place in the older section of the country to furnaces, hot water boilers, and steam.

The third important type of stoves is the cooker, which has grown naturally out of the box stove. At first cookers were made entirely of cast iron, but here also steel has come in, and wherever possible is used in their construction.

A very important development of the cooker is the steel range. It, of course, has been used for some time in hotels, steamboats, etc., but the manufacturers see a great future for it in private houses, and are pushing the trade. This applies particularly to the farming districts and to North-West Canada.

The writer has referred to the summer-like comfort of Canadian homes in winter. The modern gas cooking stove provides the same degree of comfort in summer. During the last fifteen years there has been a great demand for gas stoves in towns and cities, and their popularity is increasing. The manufacturers have vied with each other to produce the most convenient and economical type, with the result that the present-day housewife has her work and annoyance reduced to a minimum. These stoves are made in all shapes, from a large-sized range to a small iron table containing one or more gas rings. Gas heating stoves are also turned out in numerous styles, usually made of pressed steel.

The most important improvement in stove construction of recent years has been the change from iron to steel. This has accompanied the transition from what may be called the iron age to the steel age in various other lines of manufacturing. Pressed steel patterns can be turned out so quickly that the stove manu-



The Wm. Buck Stove Co., Limited, Brantford.

facturers are enabled to greatly reduce their cost of production. Pressed steel also considerably reduces the weight of stoves and makes them much neater in appearance.

There are about forty stove manufacturers in Canada. Of these the largest concerns are located in Ontario, but there are a number of important factories in the Maritime Provinces, Quebec,

and British Columbia. There are no stove manufacturers whatever in the immense territory between the Rocky Mountains and the Great Lakes, with the exception of one at Fort William.

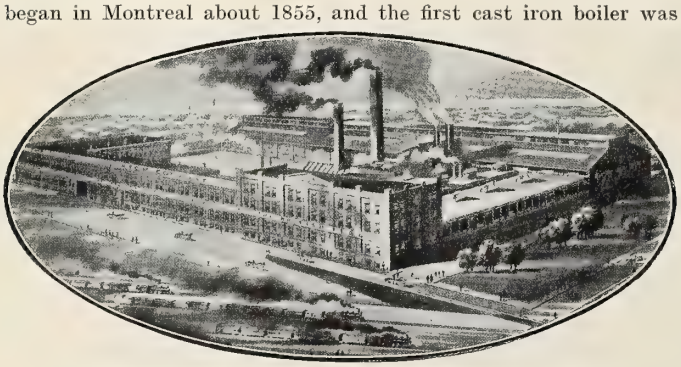
As anthracite coal is burned in Ontario and soft coal in the Maritime Provinces, two different types have been developed in these districts. Since the opening of the North-West market, however, Ontario manufacturers have turned their attention to the production of soft coal stoves, and are now making both kinds.

The increasing demand from North-West Canada is the explanation for the prosperity of the stove manufacturers at the present time. Were it not for that, so many concerns in the business might bring about over-production. As it is, the manufacturers have all they can do to fill their orders, and recently some of them have been compelled to increase their capacity. It is estimated that the output has increased fully fifty per cent. in the last five years.

The Furnace System.

As mentioned, the system of furnace heating has largely supplanted stoves in recent years. The older stove manufacturers have given their best attention to the making of furnaces, and other exclusive manufacturers of furnaces have sprung up. As the result a multitude of different styles have appeared, and the buyer has rather a difficult task to compare the several good points of all. It may be said that the entire market is supplied by Canadian manufacturers.

In most of the better class of houses the system of hot water heating is being adopted. The manufacture of hot water systems began in Montreal about 1855, and the first cast iron boiler was



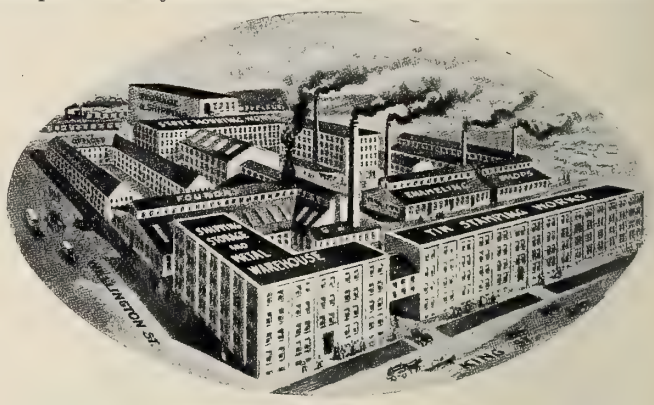
The Dominion Radiator Co., Limited, Toronto.

made in that city by Messrs. Rogers & King in 1864. Ten years later the Spence sectional boiler came into use, and in 1886 the round sectional Daisy boiler, which type of boiler is in general use to-day. Hot water heating began in Toronto in 1860, and in 1873 the Gurney Foundry Company were manufacturing the Crescent cast iron boiler, in 1875 the Nason pipe radiator, in 1878 the Bundy hot water and steam radiators, and in 1891 the present Oxford boilers.

In addition to the Gurney Foundry Company, at present four other important concerns are engaged in the manufacture of radiators. These are the Dominion Radiator Company, of Toronto, established in 1874; the Canadian Radiator Company, of Port Hope, Ont.; the Gurney-Tilden Company, of Hamilton, Ont., and the Taylor-Forbes Company, of Guelph, Ont., the latest addition to the field. Recently a company has been incorporated to manufacture steel radiators, and at the time of writing it is announced that the American Radiator Company, of Chicago, the largest concern of the kind in the United States, is about to start a Canadian branch factory at Brantford, Ont.

The duty on radiators is 30 per cent., which is sufficient to insure the bulk of the trade for Canadian manufacturers. The industry has grown very rapidly, and a few of the manufacturers have branched out into foreign trade. The Dominion Radiator Co., who lay claim to being the largest manufacturers of radiators under the British flag, commenced exporting to Great Britain in 1894, and at present are doing a large business in that market and in other European countries. Lately the company decided to establish a branch factory in England.

The manufacture of cast-iron pipe for steam heating forms a separate industry. It is carried on by the Montreal Rolling Mills in two large mills at Montreal, and the Page-Hersey Co., at Guelph. It has just been announced also that the Canada Foun-



The McClary Mfg. Co., London.

dry has decided to engage in this work, and will erect separate mills for the purpose.

The steam fittings used in Canada so far have been mostly of cast iron. They are made by the Dominion Radiator Co., Toronto; the Warden King & Son, Montreal; the Steam Boiler Co., Montreal, and Garth & Co., of Montreal.

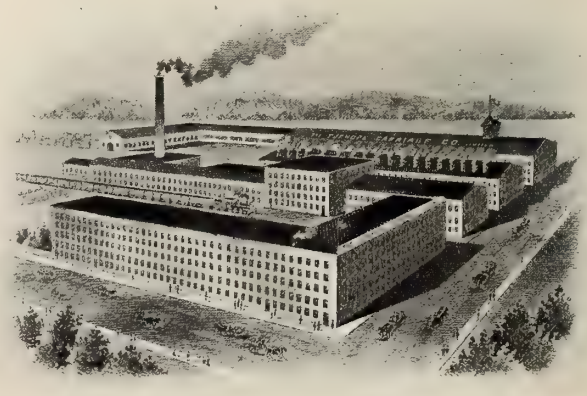
Two years ago the manufacture of malleable iron fittings was commenced by the Ontario Malleable Iron Co., of Oshawa, Ont. This firm has been able to compete successfully in both price and quality with United States firms, and its fittings are the equal of any in the world.

Plumbing Supplies.

The manufacture of plumbing supplies is an important industry in Canada, amounting to several millions annually. In the line of sanitary earthenware the announcement comes as we go to press that the Canadian Trenton Potteries Company will manufacture at St. Johns, Quebec, the same products as are made by the Trenton Potteries Co., of Trenton, N.J. The Trenton company has associated with it most of the Canadian manufacturers of plumbing supplies, and will practically supply the entire market.

Cast iron soil pipe and fittings are manufactured for plumbers' work by the Toronto Hardware Co., the Toronto Foundry Co., the Stevens Mfg. Co., of London, Ont., and Warden King & Son, of Montreal.

Lead pipe is made by the James Robertson Co. in Toronto and Montreal; the Thos. Robertson Co., of Montreal; the Montreal Rolling Mills, and the Ontario Lead and Wire Co., of Toronto; and for brasswork the market is well taken care of by the James Robertson Co., of Toronto; the Robert Mitchell Co., of Montreal; the Garth Co., of Montreal; the Stevens Mfg. Co., of London, and the Empire Mfg. Co., of London.



The Tudhope Carriage Co., Limited, Orillia.

AGRICULTURAL IMPLEMENTS.

No country in the world presents the two extremes of agriculture as Canada does—vast arable areas being settled, and older lands devoted to scientific farming. Consequently, for magnitude of production, variety, and scientific adaptability, Canadian agricultural implement industries occupy the very first rank. In no department of machinery-making have Canadian manufacturers been so successful in combining the utilization of easily available raw material with the most modern improvements of the age.

The march of improved agriculture in Canada has been peculiarly rapid. Once upon a time, and within the memory of men still under middle age, something like this used to form an inventory of the implement items on a progressive farmer's auction-sale bill:—"One plow, one pair of harrows, one fanning-mill, one wagon, one pair bob-sleighs, one sulky rake, one cultivator, one combined reaper and mower, one scraper, and other articles too numerous to mention"—which included a few forks, hoes, a spade and a scoop-shovel. With an outfit like this, a present-day Canadian farmer would consider himself as dating back to the days of Abraham, when a plow was a crooked stick. Such an outfit left a lusty margin of labor to be done by hand. Fortunately for many farmers of that recent, yet primitive era, some families contained many hands, and most farms were small, because not yet cleared up.

The hand régime has gone out of date. It was forced into the obsolete by modern invention, by the scarcity of labor, and by the rapid clearance of land, bringing an immense area under crop. These forces are still operative in Canada. Every year adds practically a new kingdom to our crop area. The same fact drains away annually hundreds from eastern Canada to the western plains. The eastern farmer's call for hired help has become of late years like the "cry from Macedonia." Therefore, the average farmer who makes any pretence to being in the race, has had to equip himself with all the machinery his pocket could possibly stand. Not only necessity, but fashion and the natural desire to improve, has led the Canadian farmer to make a large appropriation for implements. So that the market for this particular class of manufactures has always been steady and usually expansive.

These are the effective conditions from the farmer's side, all which would have been largely another chapter in Canadian importations from the United States, but for three things—enterprising manufacturers, abundance of raw material, and generally, adequate protection. Of these, the latter is not now a factor to the extent that it once was. In 1896 the present Government lowered the general tariff on agricultural implements to 20 per cent. The inventive genius and the industrial progress which put the United States implement maker in the front rank, acted as a spur to the Canadian, who considered himself as able as his rival to make farm implements on a mammoth scale. Under high protection similar to that enjoyed by his competitor to the South, and therefore on equal terms with him, he did so. Works were initiated and built up in Canada that, at the present day, are not second in modern equipment and output to any of the kind on the continent—which means second to none any where. For it is on the continent of America that the maker of agricultural implements has reached the top notch of progress, and to the credit of the Canadian manufacturer be it said that the expansion was not confined to the south of the great lakes. As a result of which it is possible to write the following arithmetic of Canadian agricultural implements:—

	1891.	1901.
Number establishments.	95	114
Capital.	$8,377,926	$18,207,342
Hands employed.	4,321	5,788
Wages.	1,750,048	2,129,241
Value of output.	7,252,005	9,597,389

This, it must be said, does not adequately represent the present magnitude of the industry, as since the census of 1901 large United States firms have erected immense plants in Canada employing thousands of hands.

Loaded on flat cars at full capacity, the amount of lumber consumed annually by one of the largest firms making agricultural implements in Canada would make a train 10½ miles long.

The annual amount of iron and steel used by this same firm, loaded on flat cars, would make a train 13½ miles long. So that to haul the aggregate of two basic raw materials used in one year by one representative Canadian firm of agricultural implement makers, would require a train 24 miles long.

Some Suggestive Figures.

As to raw material, Canada had, and still has, a national heritage for the making of farm implements. A certain Canadian self-binder contains eight kinds of wood, soft maple, hard maple, basswood, soft elm, rock elm, hickory, white ash and oak. The lumber yard of the same firm that made this binder contains sixteen varieties of wood, most of which are grown in Canada, with a stock consisting of millions of board feet, besides thousands of tons of iron and steel. With these two basic supplies of raw material it is not surprising that a mammoth modern implement plant in Canada is condensed into the following arithmetical dimensions:—Gray iron foundry, 84 x 66 feet, with annexes for sand sheds, coke sheds and core room; malleable iron foundry, 84 x 880 feet, with finishing department, 84 x 80 feet, three stories high; forge shop, 84 x 702 feet; erecting and assembling room, 72 x 353 feet, two stories and basement; knife and bar building, 78 x 121 feet, 5 stories; wood shop, 72 x 100 feet; paint shop, 72 x 178 feet, 5 stories; storage warehouse, 120 x 400 feet, 5 stories.

Another, and the largest purely Canadian firm in the world, is responsible for the following:—Annual consumption of lumber, 12,500,000 feet; average stock carried, 15,000,000 feet; annual consumption of pig iron, 8,000 tons; of steel, 15,000 tons; of malleable iron, 3,000 tons; total, 26,000 tons; number of hands employed in factory and yards, 2,000 to 2,500; number of agents in Canada, 1,500; number of implements made, binders, 25 sizes and styles for various places and conditions of harvesting; mowers, 49 styles and sizes; reapers, 9 styles; hay rakes, 30 styles; cultivators, 48 styles; grain drills, 49 varieties and styles; feed cutters, 10 varieties and styles; manure spreaders, 3 sizes; cream separators, 5 sizes; harrows, 30 to 50 varieties and styles; hay tedders, 2 sizes; stripper-harvesters, 4 sizes; hay-loaders; plows, 43 varieties, styles and sizes, from the finest equipped plow factory in the world. These implements are sent to all the countries of Europe, to Australia, to Argentina and New Zealand.

A Few Specialties.

Factories such as are indicated in the foregoing statements do not, of course, exist in every city in Canada, but they have duplicates on a smaller scale in at least a dozen places. In all the largest it may be said that the self-binder is king. The literature of this labor-saving wonder is but twenty-five years old in Canada. The writer well remembers when the first came into his section of country. It was as large as a small threshing-machine, required four horses to pull it, and just about killed three of them. It cost over $400. Now the modern self-binder, made nowhere better than in Canada, costs, $125, is pulled easily by two horses, does three times the work of the old kind, lasts twice as long, and may be seen on every improved farm anywhere in Canada west of Montreal. These machines go to nearly all the countries in the world where farming is at all scientific, except the United States with its prohibitive tariff.

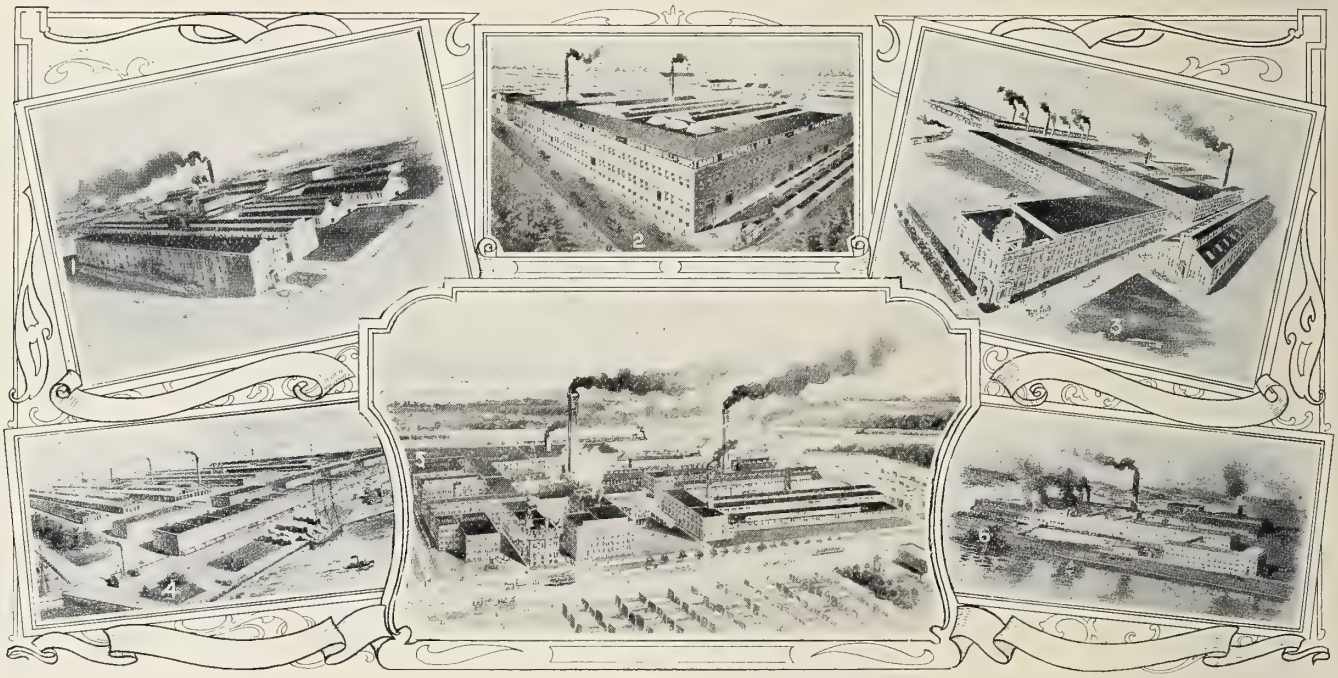
The mower is second in importance and has come to stay as a factor in the annual vast production of hay in Canada, steadily becoming greater owing to the growing trade in cattle and horses. Plows, whose varieties are legion, have become specialized. A generation ago there were but two kinds, sod plows and general purpose. Afterwards came the plow with the wheel on the beam; still later the plow with two wheels under the coulter, the gang-plow and the sulky-plow, both the hope of the western farmer with his hundreds of acres to crop in a single season. Drills are a comparatively modern feature. Hand-sowing by the Scriptural method has gone into oblivion with all its poetry. Cultivators have multiplied in variety and style. The primitive form was a one-horse affair, like the harrows and the scraper made at the village blacksmith shop. It had six teeth and two handles and was followed on foot. The modern cultivator is a sort of specialized harrow with two wheels, two horses and a seat for the driver. Hay-forks have come into vogue. The Canadian farmer who pitches off hay by hand nowadays is known as a Rip Van Winkle. Hay loaders have come into common use on large farms; hay tedders also to an even similar extent.

Manure-spreaders, modern wagon machines costing $125 each, are coming into general use, and a firm for making these has lately been established in Ontario. Fanning-mills have been revolutionized. The old yellow boy-killer was as large as a small threshing-machine and cleaned about fifteen bushels an hour. The new fanning-mill, of which Canada is able to boast the premier patent, cleans nearly a hundred bushels an hour, takes out everything, even black peas, long the despair of the farmer, and is shipped in carloads to foreign countries.

Threshers have begun to rival the self-binder for consolidation of specialties and turnover of work. Thirty years ago horse-power threshers were the best known and rare at that. The first steam threshers were rarities, about one to a township. One did the work for a whole parish, beginning in August and ending the next spring. Now in Ontario there is one in every school section and the threshing is hustled off long before Christmas. Recent developments in this machine have been the blower, which carries the straw all over the stack and dispenses with fifty per cent. of the original fork labor. These are the only kind used in Manitoba and the North-West, where one machine threshes thousands of bushels in a day from the shock to the granary.

A complete catalogue of minor specialties now in common use on Canadian farms would fill a small book. Canadian farming has become as complicated as Canadian factory life, to each job its special machine or implement, making the farmer a practical machinist. But there is no labor-saving device known to scientific agriculture that is not made in Canada, from the toy thing that sows garden seeds to the huge epical threshing-machine that devours a farm of wheat in a single day. The march in evolution and output is decidedly onward. Raw material is readily available both at home and from abroad, though a growing scarcity of suitable woods has led gradually to an extended use of iron and steel. The low duties on imported pigs have led United States makers to establish mammoth plants on Canadian soil. The present headlong rush of the United States farmer to the Canadian West means a swiftly-expanding list of practical farmers addicted to labor-saving machinery and determined to have it.

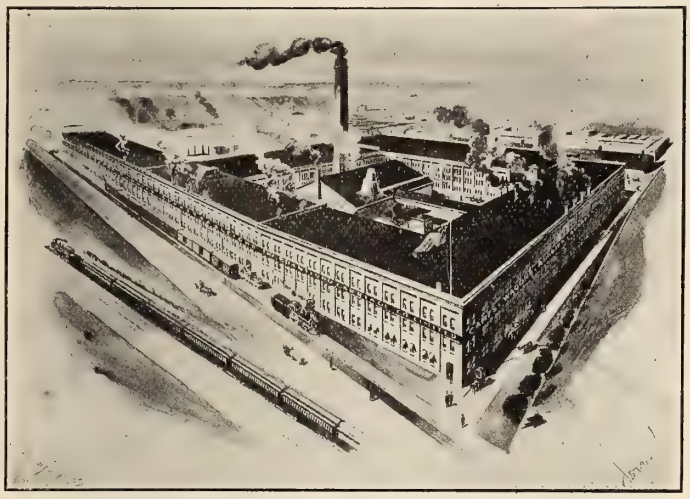
Meanwhile foreign shipments of Canadian farm implements are forging ahead, in 1903 totalling $2,284,904, an increase of 500 per cent. in ten years.



1. Cockshutt Plow Co. Ltd., Brantford.
2. David Maxwell & Sons, St. Marys.
3. The Frost & Wood Co. Ltd., Smith's Falls.
4. International Harvester Co. of Canada Ltd., Hamilton.
5. Massey-Harris Co. Ltd., Toronto.
6. Verity Plow Co. Ltd., Brantford.

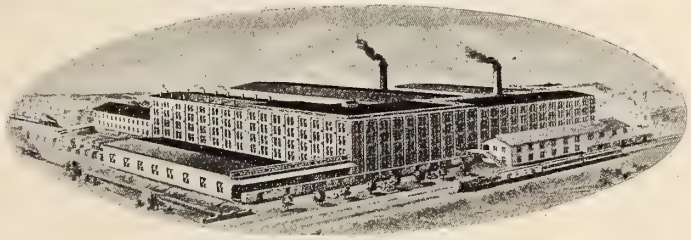
CARRIAGES AND WAGONS.

Census figures for 1901 give Canadian carriage and wagon making concerns as 349. Needless to say these are not all large factories. If fifty per cent. of these were concerns of such magni-



THE BRANTFORD CARRIAGE CO., LTD., BRANTFORD.

tude as may be found in at least a score of towns and cities in Canada, a single year's output would keep this continent in vehicles for five years. Much of the industry thus summed up in figures represents an era when large factaries were unknown in Canada. In this connection the words of one of the best known and most extensive carriage makers in Canada are suggestive. Writing under date of May 5th, 1905, he says:—



CANADA CARRIAGE CO., BROCKVILLE.

"The first the writer had to do with the manufacture of carriages was as a boy helping to press on the pedal of a foot lathe to turn the hubs. In those days it was customary for the builder, who was then styled a 'wagon maker,' to go to the woods and pick out his oak or hickory tree as the case might be, cut it down and have it brought to the shop, where the block which was sawed long enough for spokes, was split in quarters and then riven to make the sizes necessary for the different size spokes. These were supposed to be piled somewhere under cover for at least a year, and then they were squared with a hand axe and piled away for at least another year, when they were ready to be shaved out by hand into spokes for the wheels.

The hubs and other parts, each passed through their particular stages, requiring a like amount of time."

From the conditions herein implied a marked contrast will be noted by a comparison of the following figures:—

Carriage and Wagon Making in Canada in 1901.

Number of establishments making carriages or wagons, 349; capital, $6,615,525; hands employed, 4,807; wages, $1,791,181; value of output, $6,650,912.

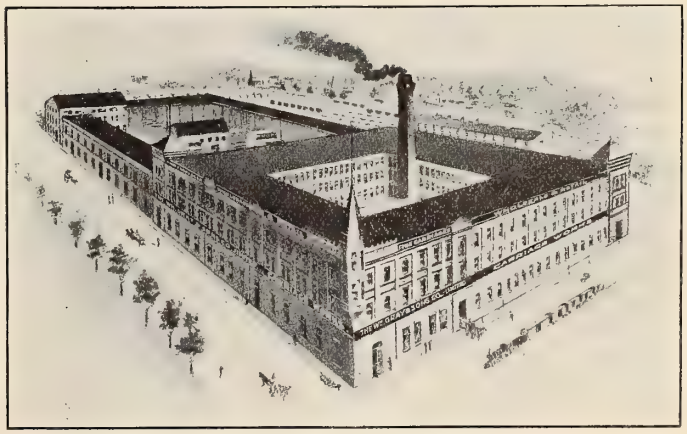
Number of establishments making carriage or wagon materials, 27; capital, $1,315,318; hands employed, 909; wages, $336,358; value of output, $1,269,271.

The Beginnings of the Industry.

The business of making wagons and carriages in Canada originated in three things, hand labor, unlimited raw material in wood and villainous roads. Then the only wagon and carriage factory was a blacksmith shop with a wagon and carriage department in the rear. Eastern Canada was once dotted with these primitive antetypes of the modern carriage factory. The blacksmith began by repairing wagons, setting tires and mending broken irons. Being a handy man, he found it possible and necessary to repair wood-work as well. With the growth of his business he devoted himself to the shoeing end and hired a carpenter who had a kit of tools and a paint pot. While the team was shod in the front shop the vehicle was mended in the rear or in a building alongside.

From that to the making of wagon-boxes and of sleighs was but a step. Runners were bought in the rough from farmers who hewed them out of the woods. Making bob-sleighs soon became a recognized industry in any village where snow and logs were part of the daily winter régime. And from that to the making of a wagon outright became easily possible when the builder was able to get his spokes, hubs and tires furnished him by manufacturers while he made by hand most of the other parts. For by this time hub and spoke factories had come into existence, making hubs turned and mortiched and spokes turned ready to drive into the hubs. These were sold to the hardware merchants in bulk and retailed to the builders along with accessories and trimmings.

But it was a long reach from the hand-made wagon to the hand-made buggy, which required not only strength but considerable finish. This, however, soon developed as a feature of the business in a large number of these concerns, often long before the communities themselves were even incorporated villages. One farmer came and left an order for a wagon, another for a pair of sleighs, and another for a buggy. A carriage of any sort was regarded as a luxury. In the vast majority of cases the best a farmer was able to afford in the way of a light running vehicle was a democrat capable of carrying the entire family twenty miles to town with a quota of domestic freight under the seats. Some men, undeterred by the most villainous of roads, had buckboards with slat bottoms,



WM. GRAY & SONS' CO., LTD., CHATHAM.

others had sulkies, to any of which one man was a load with a brown jug of vinegar or molasses at his feet. The old shoebox buggy was often seen on farms, while in the older communities

a certain ancient style known as the "layback" buggy was in vogue. A luxury like this came some distance and cost accordingly.

Later came the square-box buggy without a top, still with the heavy four-ply spring, the big axle and the clumsy hubs. This was made by the village wheelwright and cost as much as a reaping-machine. When the first top-buggy appeared in many a rural



The Ledoux Carriage Co., Ltd., Montreal.

section it was a nine days' wonder. In a funeral procession it was as conspicuous as a calliope in a circus parade. The top, if any good at all, cost $35 and it was as heavy as the price. The man who owned this rig probably made money buying other people's hogs and cattle. The top, of course, was procured from a wholesaler somewhere in a large town. The convenience of a top rig became proverbial. It was also stylish. Ten years after the advent of the first one a funeral was not considered respectable without at least fifteen top buggies. And it soon became the saying that top buggies and mortgages were becoming commonplaces. Then came the cheapening in the price of the top coincident with a lessening in the cost of the body and the wheels and the trimmings. By this time the machinery era had gotten well under way in the manufacture of carriages. It became less common for a farmer to go to his village builder and order a buggy built after a certain model. Instead, he bought an "assembled" buggy, of which the body, unpainted, had been made by one firm, the top by another, the hubs and spokes by another, and the springs and the etcetras by still another.

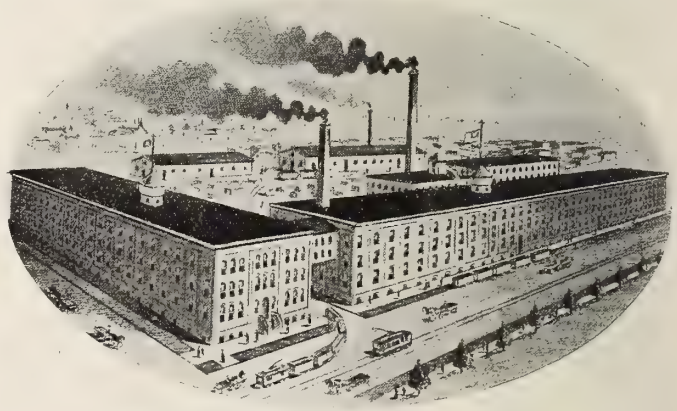
The large carriage factory was now beginning to develop with its machinery for special parts. Carriages were made according to a variety of styles, and the styles were necessarily stereotyped. The fact that carriages were becoming common with the improvement of roads, the growth of wealth and the evolution of luxury, made customers less particular about finical distinctions and more satisfied with a certain well-defined style of rig which had a fine finish, was light, durable and comparatively cheap, had the dignity of being pictured in a catalogue with a possible name, and may have been made by a dozen different firms, each devoted to a specialty. From such conditions and into such proportions has the modern wholesale manufacture of carriages developed in Canada. To-day there are fifteen large carriage factories in the country turning out each year from ten to fifteen thousand vehicles. Some of these for style and finish and general elegance are not surpassed anywhere on the continent. Their products go from ocean to ocean in a score of styles. Instead of merely "assembling" his carriages out and out the large manufacturer repeats on a huge consolidated scale the work of the early village maker who built almost everything. The use of machinery has cheapened the product, even with an advance in the price of wood, leather, paint and labor. Several wheel companies have developed along with the hub and spoke concerns, the makers of tops and bodies and the makers of springs and axles. These wheel concerns turned out last year upwards of 75,000 sets of wheels. Cheapness and elegance have become consolidated in the modern light carriage made to please equally the thrifty farmer and the fastidious city man with his team of hackneys, or his coach horse. Some idea of the evolution of cheapness may be learned from the fact that a buggy top which in the first years of such luxuries cost $35, may now be bought for $8.

The evolution of the Canadian cutter has been a continuous feature of the carriage business. For absolute antiquity the ancient double or single cutter rivalled even the pioneer Canadian buggy. The modern cutter in its plenitude of elegant styles, nowhere in the world seen to finer advantage than in Canada with its large area of snowfall, represents the best traditions and the latest novelties of the trade. The day has long since passed when a cutter was merely a stereotyped kind of light sleigh, always with the same kind of frame to sit in instead of a box. The Canadian cutter has developed until it simulates almost every luxury of the carriage.

Evolution of the Wagon.

A like story, with fewer complications, has been written by the wagon industry. Practically all that has been true of the Canadian carriage has been true of the Canadian wagon, to turn out which, by thousands in a year, immense factories have developed in various parts of eastern Canada, rivalling the mammoth concerns of the United States. The wagon industry has been largely cut away from that of carriages since the advent of the machine era calling for distinctive machines for each. A representative wagon firm now catalogues wagons in eleven styles, in a dozen varieties, carts, lorries and drays alike diversified, all to suit some particular place, kind of traffic or class of purchaser.

The early wagon was hand-made, literally hewed from the woods and built by the village blacksmith. The modern wagon is a work of useful art adapted in light running qualities, in durability, in capacity for heavy haulage, in road-making, and in convertibility, to the most exacting purchaser. Once, when the farmer broke a reach, a tongue or a double-tree, he hewed another out of a white ash and a piece of hickory. His white ash and hickory have gone. Now he buys his tongue, his extra reach and his whiffle-trees. Once he made his own wagon-box on wet days from his own pile of seasoned lumber. If he wanted to haul corn, or roots, or take a live pig to market, he put on top boards with cleats to make it a double box. A seat he made



McLaughlin Carriage Co., Ltd., Oshawa.

of hickory springs over a cross-piece. To-day he buys the box with the wagon, double or single at will, with spring seat and foot rest, if in a hill country with brakes, all painted in shining colors and far more tasteful than the ancient buggy used to be. Instead of making his own hay-rack on stormy days, a thing that weighed almost as much as the wagon, he now buys it outright, light and strong, from the wagon-maker, convertible into a stock rack by tilting up the sides and removing the ladders.

Certain famous wagons with the names of the makers on the boxes travel from ocean to ocean and beyond. Wagons are

seldom imported from the United States except as settlers' effects. Raw material in the shape of wood is often imported. Certain hard woods and soft pines for tongues, etc., are obtained from the Southern States; also bending material for buggy axles, shafts, etc.

Exports.

Exportations of vehicles from Canada for 1904 were:

Carriages to 11 countries, value	$78,045
Carriage parts to 10 countries, value	13,350
Carts to 8 countries, value	13,375
Wagons to 7 countries, value	3,684

In modernness, durability, style, finish and price Canadian wagons and carriages are as good as the best anywhere. The most fastidious customer need not go outside of Canada to get the best. Makers have travelled and they have studied. They have studied the possibilities of the trade, the prevailing foreign styles and the idiosyncrasies of local purchasers. They have aimed at monopolizing the home market. They have had an ambition to send their products abroad. In all these they have succeeded. The modern large carriage or wagon factory is a little world of work and workers, embodying the latest and best machinery and run on most scientific lines. And a significant fact about it is that men who are in the fore front of the trade, like the gentleman quoted at the beginning of this article, remember when they hewed buggies and wagons out of the Canadian woods by hand.

PAINTS, OILS AND VARNISHES.

The story is told of a certain British paint-maker of the old school that, upon hearing of the number of Canadian towns that were repeatedly being painted red, he at once sent out his traveller with samples in order to secure a share of the business. The traveller, after a most enjoyable holiday spent in learning this interesting art, reported that while it was frequently the means of imparting a great deal of local color, he could not see that it produced any appreciable effect on the output of Canadian paint factories, which were already in control of all the business offering.

The story is probably, for the most part, a fiction, though its reference to the ability of local establishments to take care of the home market is a simple statement of fact. For years the manufacture of paints, oils and varnishes has been carried on very extensively in Canada. It has become an industry of considerable importance—an industry that is backed by a large amount of capital, that employs many hundred hands, and that directly aids in the development of our natural resources. It is an industry that has advanced far beyond the experimental stage, and that has shown itself worthy of being encouraged, for it offers to the consumer a high grade article at a moderate price. So securely has it become established that it has been able not only to control the home market, but even to reach out for foreign trade, and to-day we find Canadian-made paints and varnishes shipped in considerable quantities to Newfoundland, the West Indies, and many other countries. Even homes in distant Australasia are decked with Canadian paint. As yet, this foreign trade has not been as energetically pushed as it might have been, but the time will come when the Canadian article will be used abroad much more widely than it is at present.

The beginning of the Canadian paint industry is to be found away back in the early years of last century. It was a modest beginning, but with the steady increase of population, the rapid expansion of the country, and the opening up of new resources, the manufacture of paints and oils was undertaken on a larger scale. A larger supply of a better article was found necessary, and the Canadian manufacturer proved equal to the occasion. It was a time when the foreign manufacturer might have had a golden opportunity to seize the market, but the Canadian maker by his enterprise and energy kept him out.

More capital and more efficient machinery were introduced, and to-day we find about fifteen large paint, and twelve varnish factories in operation in the country. It is often difficult to estimate the value of an industry's output, as manufacturers are naturally reticent about giving figures, but a conservative estimate allows $8,000,000 as representing the combined production of paint and varnish in Canada last year. The capital invested in these enterprises may be stated in round figures at about $6,000,000. In the manufacture of paints alone, about 2,000 hands are employed, and several hundred are engaged in the varnish factories. As a general rule, the factories are thoroughly equipped with the most up-to-date machinery, intended to produce a good article at a minimum cost.

In the high-class varnish business, to select an example, an article is produced that has no superior in the world. This is clearly proved when we find that varnish of that quality can be shipped to the United States and sold in the face of a forty per cent. protective tariff. Many United States firms have been found willing to buy Canadian varnish at a higher price than their own home-made article on account of the stability it possesses. There has been a great deal said about the high standard of the English makes of varnish, but the Canadian manufacturer believes that he can turn out an article in every respect equal to the highest quality varnish made in Great Britain. High-grade Canadian varnish takes from two to four years to mature, and at every factory many thousands of gallons of ageing varnishes are stored in the tanks situated in the specially constructed warehouses. These warehouses have to be evenly heated and protected in every possible way known to modern science from danger of fire.

Besides branch factories in different parts of Canada, several firms have offices in the United States for the disposal of their product.

Tariff.

The existence of a substantial Canadian tariff on paints and varnishes has served to exclude the foreigner in only one way. Taught that he cannot hope to compete against a high-class Canadian-made article, which is backed by a fair tariff, he has conveyed his capital over the border and established branch factories here for his Canadian trade. This method, while affording keener competition for Canadian capitalized concerns, still retains much of our money in circulation at home, and provides hundreds of Canadian workmen with employment, besides assisting in the further development of our natural resources. The British manufacturer might profitably follow the example of his United States confrère in this respect. Such a method would enable him to supply the market on the spot and keep in touch with its changing demands.

The prevailing duty on finished paints, oils and varnishes is considered by the trade as none too high when the cost of raw materials and other changes are taken into account. By the present tariff, ground and liquid paints, rough stuff and dry and liquid fillers are protected by a 25 per cent. ad valorem duty. Paints and colors ground in spirits and all spirit varnishes and lacquers have a duty of $1.12½ per gallon. Putty has 20 per cent.; varnishes, lacquers, japans, japan driers, liquid driers, and

oil finish are guarded by a double duty of 20 cents per gallon, and 20 per cent. ad valorem. Linseed oil is protected by a 25 per cent. ad valorem duty.

Raw Materials.

The raw materials which are employed in the manufacture of paints and varnishes may be classified under the following heads: turpentine, linseed oil, dry colors, dry white and red lead, orange mineral, zinc white, lamp black, ivory black, litharge, ochres, ochrey earths, raw siennas, oxides, umber, burnt siennas, ultramarine blue and whiting. Of these a certain amount of dry colors, litharge and white lead is made in the country. Some oxides of excellent quality are obtaiqned in Canada, while mineral and vegetable pigments, graphite and a little barytes are also found. For raw materials for paint, Canada is indebted to Great Britain for linseed oil, dry white lead, oxides, Indian reds, Venetian reds, whiting, dry colors, vermillion, litharge, red lead and orange mineral. Germany is called upon to supply such articles as white and red lead, litharge, zinc white, aniline dyes and barytes. The United States affords turpentine, lamp black, ultramarine blue, barytes and dry colors. Italy gives umbers and siennas, while France supplies dya ochres. The probable value of raw materials imported into Canada each year for the manufacture of paints is about $1,500,000.

Imports.

The annual statistics compiled by the Dominion Government show that the total imports of paints and colors into Canada for the year 1904 amounted to $1,263,176, rendering in duty to the public coffers the sum of $131,646. In 1903 the value of imports under this head was considerably greater, being $1,369,134. This, of course, includes all articles, some of which are not made in Canada at all, and the raw materials for the manufacture of mixed and other paints. If the amount of paint imported into the country similar to that manufactured here were figured out, the value for 1904 would be only $215,948, and for 1903, $209,290. In other words, while the total consumption of paints in Canada is in the neighborhood of $8,000,000, only $215,948 of this is made outside the country.

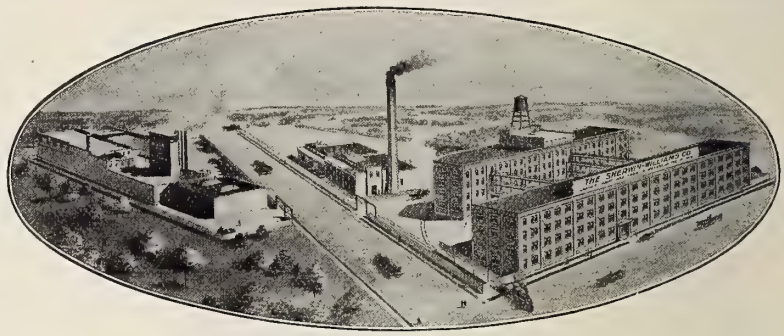
That a similar state of affairs exists in regard to the varnish trade is also apparent by the import figures. In 1904 the total value of varnishes received into the country was $129,643, as against $144,528 in the preceding year. Canada is evidently holding its own in the paint and varnish business. What articles are imported are confined chiefly to the Maritime Province and the Pacific Coast.



Standard Paint and Varnish Works Co., Windsor.

Exports.

Canadian paint and varnish factories have up to the present time been more concerned in holding the home market than in seeking to sell their wares in foreign lands. Success at home has, however, tempted several to look abroad for wider fields of activity, and already Canadian goods are finding their way to Newfoundland, the West Indies and Australasia. The export business at present amounts to about $50,000 a year, and there is every chance of it steadily increasing as the value of the Canadian-made article becomes known. For many years there has been a small export trade done in ochres, ochrey earths and other dry material used in the manufacture of liquid paints outside the country. This trade in 1900 amounted to $7,599, while last year it had reached $8,206.



The Sherwin-Williams Co., Montreal.

There are in Canada several factories for the production of linseed oil, and it is estimated that their combined capacity is about 65,000 barrels a year. The linseed oil is used in the manufacture of such articles as paint, varnish, leather, linoleum, etc. A large amount of linseed oil is imported each year from Great Britain, because it is made very cheaply there. The reason assigned for this lies in the fact that in Canada linseed oil is the main product of the mills, while in England it is only a bye-product.

Dry White Lead.

One of the recent steps towards the extension of the paint and varnish industry has been the erection of a factory in Montreal for the manufacture of dry white lead and white lead in oil. Up to the present, little has been done in these lines on account of the small protection afforded by the tariff. But before long, no doubt this will be changed, and Canadian factories instead of importing their dry white lead, which to them is a raw material, will be having it supplied here. At present the duty on dry white lead is only 5 per cent., and to warrant the production of it in Canada a duty of 30 per cent. would be required. This will in all probability be granted. The reason for the high tariff is that the pig lead duty is 15 per cent., and the cost of machinery and supplies, such as coal, is greater than in the United States. Hitherto the imports of dry white lead have been considerable, but it is hoped a change will occur shortly. In 1904, the value of dry white lead imported was $662,098, and in 1903, $758,371.

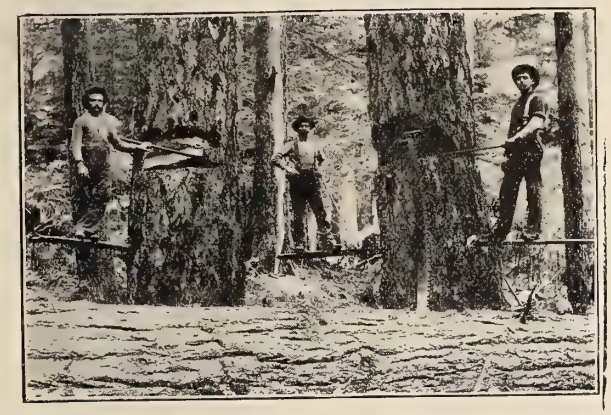
The finished Canadian paint and varnish is poured into Canadian-made cans, and, after labelling, is ready for shipment. Many of the factories have their own can departments.

J. H. Wetley, Ltd., St. Catharines, manufacturers of mince meat, are rushing up a building to be ready for occupancy by Sept. 1st, which they intend to use as a canning factory for all kinds of vegetables.

The Intercolonial Railway is calling for tenders for the erection of new shops at Moncton, N.B. The buildings will cover a space 150 x 643 feet, and will be among the most complete in Canada. The erecting shop will have 24 pits, and will have a 130-ton electric crane for lifting locomotives, besides other first-class equipment.

LUMBERING.

Total production in Canada of timber and timber manufactures in 1903, $125,000,000; total shipments abroad of Canadian lumber and timber in 1903, $36,386,015.



FELLERS AT WORK.

Alarmists have wailed over the passing of the wooden age. From figures such as these it might be judged without other mathematical proof, that lumbering is still the premier industry of Canada. Of this colossal amount of exports in wood $16,000,000 went to the United Kingdom and the same amount to the United States. Itemized as to class of shipment it represents: pine deals, $3,652,467; spruce and other deals, $8,315,454; planks and boards, $14,002,788; shingles, etc., $1,610,143; box shooks, $440,172; birch, square timber, $204,690; pulpwood, $1,558,560; sundries, $6,548,771.



ON THE SKID ROAD.

Canada has long been known as a wooden country. Once the people of Great Britain thought Canadians were all living among the Indians in the forest primeval. So they were; and a good share of Canada's industrial population is still in the woods. Her romantic past is built up on that fact. Her commercial and industrial present and future are identified with it. A century ago Britain recognized the fact that Canada had a large share of the world's wood. Her pine and white oak went by shiploads to British shipyards. In 1850 there went from the forests of the Maritime Provinces and Quebec 1,052,817 "loads" of timber (18 loads being a ton) to the United Kingdom; in 1902 from all Canada 1,733,291 loads. This net increase of more than 700,000 loads exists in face of the fact that the wooden age in ships is declining, and as a complement to the fact that Canadian home-consumption of lumber in 1903 was five-sevenths of the total production. Another progressive fact in this connection is that in 1867 shipments of unsawn timber were 42 per cent. of the total outgo, whereas in 1902 sawn-timber exportations formed 93 per cent. of all shipments to Great Britain.

This introduces the saw-mill which has been and is still one of the mightiest engines of industry and civilization on this half continent. Once there was the picturesque epoch of the *coureur du bois* and the river-driver, in the days when the Ottawa and the St. Lawrence Valleys were sending out the great pines and oaks in crude form to the United Kingdom. Now there is the less romantic but more profitable epoch of the saw-mill and the factory.

In parts of older Canada the saw-mill was long the only hope of the settler, in getting the forests out of the way and as far as possible transformed into lumber. What the saw-mill could not take the logging fire did. There were forests to fell and homes to build. Canada was then but a fringe of settlement along two rivers and three lakes. She had not begun to get into the world's markets. She had not begun to reckon timber manufactures by millions.

National Inventory of Timber.

Half a century behind the United States in gobbling up her forests Canada years ago began to ship timber across the line to the United States. Her own inward settlement still extending, she began to explore her vast woodland heritage; for it was evident that the forests of Canada would soon be a big factor in world commerce. North and west went the surveyors, seeking a solution of the important problems: what are the great timber areas still remaining north of the 49th parallel and the great lakes; what their extent and their varieties of timber; how soon must a halt be called in the wholesale vandalism of the lumber-camp and the saw-mill?

These questions have just about staggered national arithmetic. Broadly speaking it has been found that Canada possesses the greatest areas of intact forest wealth in the world. First as to acres, irrespective of timber varieties. Quebec alone still contained in 1901, 209,741,463 acres of forest land. New Brunswick contains 6,250,000 acres. Nova Scotia, 3,932,999 acres; Ontario, 12,800,000 acres; British Columbia, 182,754,560 acres; Athabasca and the Upper Saskatchewan Valley, unknown, but a region rich in some varieties of smaller timber, yearly becoming more valuable as an article of internal commerce.

The manifold uses for wood in modern civilization have revolutionized lumbering and the consequent value of these vast areas of timber. Canada no longer ships abroad merely pine and oak. There are more kinds of

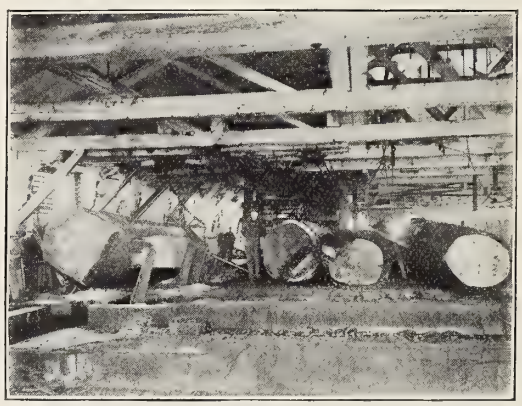


A LOGGING TRAIN.

timber constantly crawling out of the forests into the world's market than there are nationalities in the country. The modern demand has brought the small tree into the market. Economy has become necessary as is always the case when stock-taking begins. Pushing into the forest, not only up the streams but away from them, it becomes a matter of profit to use all kinds of timber possible within reach of the mill. The mill has gone ahead of the railroad. The portable saw-mill has cut its way through the great timber areas, manufacturing trees into a more or less finished product right in the woods. It does not pay to move a mill merely to follow the big timber, when small timber can be turned into an article of commerce.

What are the timbers that now enter Canadian saw-mills and make the heaps of sawdust from Halifax to Vancouver and north almost to Hudson's Bay and Alaska? Pine, oak, spruce, poplar, balsam, birch, beech, elm, hemlock, cedar, maple, hickory, tamarac and basswood. In Quebec, Ontario, New Brunswick, Nova Scotia, and most of all in British Columbia are still vast areas of pine lands. In British Columbia the old red Douglas fir, known to the trade as "Oregon pine,"," is the leader. Its maximum diameter is 30 feet, its average from 5 to 6 feet; its average height 100 feet. The eastern pines are smaller but of equal quality. These are especially valuable, not merely as lumber and boards but as building, such as bridges and ships. In British Columbia the pine belt reaches as far north as the Rockies extend. In Ontario and Quebec it extends to the Abitibi country and Hudson's Bay.

Next in importance comes the red cedar which has just about monopolized the shingle output of Canada; used also extensively for posts, poles, interior finishing, furniture and doors. White pine is much in demand for window-sashes, barrels and doors. Spruce, one of the biggest problems in timber arithmetic in Canada, has sprung into prominence as the king of pulpwood, besides being generously used for building purposes. Balsam has become only second to spruce as a pulpwood. Common cedar, vast quantities of which are found in four Provinces, has gone into big figures for cedar blocks, railroad ties and posts. Tamarac also has become a huge factor in the making of railroad ties. Hemlock has latterly gotten into the commercial belt as a good substitute for coarse pine in building.



Eight-foot Log Being Turned on the Carriage.

Many of these commercial timbers have become articles of export since the wholesale denudation in the United States. Classified as to manufactured forms they embrace logs, masts and spars,



Log Chute Showing Log Striking Water.

match blocks, piles, poles (hop, hoop and telegraph), posts, square timber, sleepers and railroad ties, stave bolts, lumber, shingles, staves and headings, paving blocks, barrels, hoops, doors, sashes and blinds, matches, pails, tubs, churns, and boxes, spools and spool woods, woodpulp and pulpwood, tan-bark, firewood, lath, and box shooks.



British Columbia Tooth Picks.

These products represent a little world of work and an army of workers. The man with the axe in the forest and the man with the pike-pole on the river drive have developed into a vast co-relation of industries. Their total output from camp, mill and factory averages now $125,000,000 a year; total shipments abroad as quoted above, $36,336,015. From this it may be deduced that the annual amount of timber in various forms of manufacture used in Canada is $88,663,985. This means for every man, woman and child in the Dominion $16 worth of timber consumed annually. A large part of this spells western development. The great prairies of the North-West are being filled with people. The timber they build and furnish with comes from British Columbia and the eastern Provinces.

The mills and factories which turn out this annual $125,000,000 worth of timber and wood manufactures represent an investment of $120,000,000, exclusive of the vast amount invested in timber limits. The wages paid in Canada annually to the workers in wood total $30,000,000.

Exports.

To itemize the vast aggregate of timber shipments the world over would require pages. Canada sends planks and boards to nineteen of the principal countries in the world, to every continent and across all the seas. The whole value of these planks and boards that drift the world over amounted in 1903 to $14,005,788. Of this, almost two-fifths of the whole value of shipments, the United States were our customers for $10,571,940; Great Britain, $1,552,736; British Africa, $141,268; British West Indies, $111,799; Argentina, $873,370, Chili, $109,721; Cuba, $119,954.

Spruce deals and others, except pine, Canada sent to nine principal countries to the extent of $8,315,404. Of this Great Britain took the lion's share, $7,643,953 worth; France, $128,010; United States, $257,647. Of pine deals also Great Britain took $3,536,822; of pine square timber, $1,294,716. Of shingles the United States took $1,596,181; of wood pulp, $1.795,568; of pulp wood, $1,558,560.

These are random items, but they represent the chief shipments and give a faint indication of what our army of woodworkers is doing for the wide world.

Now for a few long totals in arithmetic to suggest how this vast annual total of $125,000,000 is distributed in production. For the years 1903-04 the mills of the Ottawa Valley cut 1,122,-

800,000 feet. A large percentage of this huge pile of wooden millions were sent to Great Britain. Still in the same Province of Ontario and further west the Georgian Bay mills in 1903-04 cut 1,397,000,000 feet. Most of this was pine, with perhaps 10 per cent. of hemlock and hard woods. Quebec has a similar story. For the same two years the ports of Montreal sent across the Atlantic 385,218,607 feet. Ports east of Montreal sent 748,-674,736 feet. British Columbia also marks the years 1903-04 with large figures. Shipments abroad from the mountain province on the Pacific totalled 104,438,471 feet. Clear across the continent to New Brunswick and still this wholesale juggling, with the everlasting pine and spruce for the counters. Total shipments from New Brunswick to trans-Atlantic ports for these two years reach 747,343,598 feet. From Nova Scotia went out in the same period 197,000,000 feet from Miramichi, and 117,550,000 feet from Halifax.

The Future.

How long may these annual almost cosmic movements of timber continue in Canada? The question is being asked by a few fantastic futurists, and fanciful mathematicians have been busy on the problem. The figures remind one of astronomy. Certain it is that in the older parts of the Dominion a scarcity of timber is beginning to exist. But to the north all across the continent extends the belt of new timber areas. Slowly the sawmill is crawling northward. What was once thought to be a wilderness of scrub is found by the explorer to be valuable forests. The problem is largely one of transportation rather than of absolute supply. By actual exploration, however, and calculations based on average rate of consumption the following suggestive table of prophecies has been compiled for the Province of Quebec alone:—

	Stock.	Yearly Consumption.	Duration.
Pine, feet	37,900,000,000	460,631,484	82 years.
Spruce, feet	87,313,438,000	641,239,520	137 "
Cedar, feet	1,660,000,000	68,777,000	24 "
" Ties	220,000,000	2,703,807	81 "
" Posts	17,500,000	119,072	147 "
Hard wood, feet	356,000,000	14,082,334	25 "
Pulpwood, cords	176,783,996	526,865	334 "

PULP AND PAPER

Sixty-eight per cent. of the paper annually manufactured in Great Britain is made from wood pulp.

The world's pulp areas are all in the northern zone.

Of the world's pulp areas Canada has by far the largest in the world—mostly spruce.

To manufacture spruce into pulp requires unlimited water.

Canada's greatest aggregation of water powers is in the spruce belt.

Pulpwood, pulp and paper are as indigenous to Canada as wheat.

With 6,000,000 population, Canada requires but a small annual fraction of her potential paper manufactures.

Canada is able to export paper-raw-material and paper on a large scale.

Her pulp areas are threaded by rivers leading to important lines of railway and the sea-board. She is contiguous to the United States, her chief market for pulp.

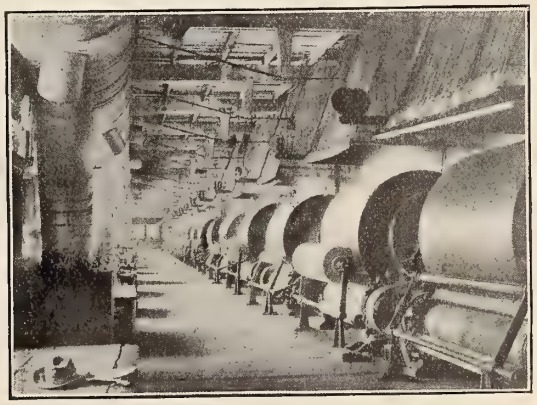
By the most conservative estimate, Canada has pulp timber enough to last 5,000 years. Vast areas which, before the advent



Drive of Pulp Wood on the Goulais River.

of the wood-pulp era in paper-making, were regarded as scrub forest, have become a huge economic asset. Figures are not available to express individual pulpwood areas, but the visible aggregate of pulpwood is estimated at 4,500 million tons.

Paper consumption is enormously increasing, most rapidly in the United States, our best market for wood pulp. One large United States daily uses 200 tons of paper every day. Such Titanic consumption of paper has only been made possible by pulp. The historical stand-bys, rags, cotton waste, straw and vegetable fibre, stand to-day about where they were ten years ago in paper production. Pulp has enormously increased. In Great Britain annually over $14,500,000 worth of pulp is used as against scarcely more than $7,000,000 of all other materials combined.



Driers in a Pulp Mill.

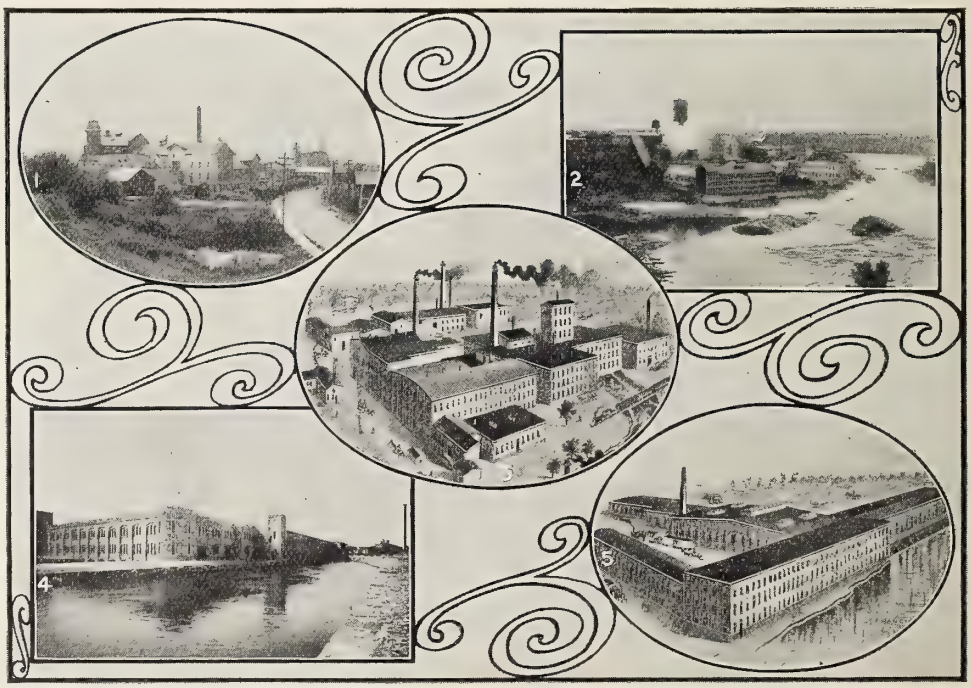
What is the statistical history of pulpwood in Canada? The following figures are both interesting and conclusive.

Value of Pulpwood Exported from Canada.

1897, $741,959 (U.K., $164,138; U.S., $576,720).
1902, $2,046,398 (U.K., $818,580; U.S., $1,170,480).
1903, $3,150,943 (U.K., $1,129,173; U.S., $1,795,768).

In seven years wood pulp exports from Canada have more than quadrupled. The value of exports to Great Britain has multiplied itself by eight, while exports to the United States have trebled during the same period. The outgo to other countries, while showing a similar expansion, aggregates a small total, showing that our great natural markets for this class of semi-manufactured material are Great Britain and the United States.

Canada's total output of wood pulp in 1903 was $5,219,892, or just about $1 per capita. In comparison to the immensity of the trade this is a mere bagatelle. The amount consumed in Canada, however, was $2,206,451. This, in view of the fact that Canada is yet a large importer of finer grades of paper, is a much better showing. On the same basis of consumption, about 40 cents a head, what would our trade in wood pulp come to with the United States alone? Not less than $32,000,000 per annum! Can we aspire to a lion's share of this enormous trade? That depends upon visible supplies of raw material, on water power, on transportation, on tariff regulations and on demand. It also depends upon past progress. What has already been done?



1. The Riordan Paper Mills Ltd., Merritton. 2. The Laurentide Paper Co Ltd., Grand Mère.
3 and 5. Canada Paper Co. Ltd., Windsor Mills and St. Francis.
4. The Sault Ste. Marie Pulp and Paper Co., Sault Ste. Marie.

In 1881 there were but five pulp mills in Canada, with a total turn-over of $6,300. Ten years later (still in the infancy of pulp) the mills had multiplied by five and the output increased to $1,057,810. In 1903, twenty-two years after the beginning, the number of mills was 39, total daily capacity 1,250 tons, total output $5,218,892, total investment more than $15,000,000. The output has been multiplied by 8, and the number of mills by 6½. It will also be noticed that the increment of 1903 over 1891 is five times that of 1891 over 1881.

The present forty mills of Canada, which for nine months in the year chew our spruce forests into pulp, are like mice nibbling at a wooden mountain. The visible 4,500 million tons of pulpwood in our forests require more mills. What hinders Canada from multiplying her pulp mills? Is it raw material? She has all but a monopoly. Water power? Water in dynamic forms is abundant in the spruce belt. Of a total 110,630 h.p. already in commission, 102,960 h.p., or 90 per cent., represents water power. Is it lack of transportation? Railways and navigable rivers have settled and are still settling that in conjunction with two oceans, both fringed with pulp forests. The Grand Trunk Pacific is expected to tap vast areas of pulpwood in Quebec and Ontario, affording an outlet for the pulp of the latter Province by means of Hudson's Bay. The pulp lands of New Brunswick, Nova Scotia and British Columbia are already accessible by both rail and water.

What then is lacking? Markets. These are bound to develop. The world's visible supply of pulp is visibly and rapidly declining. The world's demand for paper is visibly and rapidly increasing. This is especially true of the United States. There the call for Canadian pulp practically began six years ago. Here is the story of it.

Value of Pulpwood Exported from Canada to the United States.

1898	1900	1903
$368,633	$1,405,052	$1,867,023

The synopsis of this story is an increase in five years of nearly 500 per cent., or 100 per cent. per annum. One great cause has contributed to this—the enormous increase of paper consumption in the United States, typified by an annual consumption of 60,000 tons, costing $240,000, by one New York daily alone. This is the paper fiend that has stripped the pulp areas of the United States. Thirty per cent. of all pulp used in the United States now comes from Canada. Four of the largest mills, which recently withdrew from the General Paper Company, now acquire all their pulp from Canada. United States paper concerns have grabbed a big percentage of the best pulp propositions in Canada. United States capital has lately been invested in Canadian pulp areas on a large scale—and yet on as small a scale as possible. Most of the United States firms established in this country have set up pulp mills alone, preferring to manufacture paper in their own country, having in many cases paper mills already established there. Some have merely acquired pulp areas and ship out pulpwood to be ground in their own mills. Others buy pulpwood direct from this country, costing when laid down at United States mills $11 a cord. Canada in all but the Province of Ontario has so far been charitable enough to let $1,500,000 worth of pulpwood annually go across the border to United States mills.

The pulp areas of the United States have gone into literature. Those of Canada are helping to make the world's work and the world's paper. With an export tariff on pulp timber our shipments of pulp and of paper to the United States must enormously increase. Geography demands it. And the United States will soon lead the world in its per capita consumption of paper.

As to Great Britain what? As yet we send but 7⅓ per cent. of the raw material required to make the United Kingdom's annual million tons of paper. Why not more? Transportation is a

partial barrier, but comparatively ineffectual as may be shown by the facts. The effective reason thus far has been Scandinavia, the pulp areas of which now supply 86 per cent. of Great Britain's annual demand. But Norway and Sweden are but a patch compared to Canada, and the pulp forests of Norway and Sweden are fading away. What are the facts and figures of this?

Value of Wood Pulp Exported from Scandinavia.

1888.	1895.	1901.
$5,548,167	$5,709,680	$6,330,987

Increase in fourteen years, $782,820, or about 7 per cent.

Increase in Canadian exports for the same period, 2,000 per cent.!

Independent of geography, and in spite of long distance transportation, the odds as compared to Scandinavia, based on increase of exports, are 2,000 to 7 in favor of Canada. One reason of this is the superior milling quality and toughness of Canadian spruce fibre. And even if Imperial preferential trade should carry in Great Britain, with pulp still on the free list, Canada's pulp exports should still gain rapidly on Norway and Sweden.



THE GREAT WEST SADDLERY CO., LTD., WINNIPEG.

There are possibilities also of a healthy trade based on an already existent demand in France for Canadian pulp. Australia, too, and New Zealand, on the other side of the world, are getting into the ring. We shall ship from British Columbia to Japan, when that country has decided that the pen is mightier than the sword, for the pulp forests of British Columbia are within easy reach of large rivers and unrivalled water powers, and owing to the damp climate of the coast the spruce of that country is remarkably free to pulp. East, west and south the product of the pulp mills of Canada must go in annually increasing quantities. It is merely a question of time and of natural law, in which natural law is sure to win.

That pulp and paper making in this country is not merely a paper proposition is proved by the fact that Mr. Alfred Harmsworth, perhaps the greatest paper consumer in Great Britain, with a company capitalized at $10,000,000, is about to invest $5,000,000 in pulp lands, pulp and paper mills and a pulp railway in Newfoundland, whose only advantage over Canada is slightly cheaper labor and the comparative nearness of material to shipping point and of shipping point to market.

The undoubted economic future of the pulp industry in Canada is the manufacture of paper. Canada is able to ship pulp at a profit—always reduced by the freight charges. Experience has shown that where pulp and paper mills have been combined the enterprise has been still more profitable. When pulp mills alone were put up there was sometimes a loss, usually in the case of foreign investors who did not understand the economics of pulp and did not look well after the business. With 90 per cent. of the power in pulp mills classed as water power, it becomes easy to extend that cheap power at a comparatively small cost to run both paper and pulp mill. An immense advantage in concentration, too, is the fact that screenings from the pulp mill can thus be got at first hand for the stiffening of coarse paper.

Already Canada has made a strong showing in the paper field. Her own mills consume annually two-fifths of her total output of pulp. Much of this is used in making news print, of which this country is able to supply a large percentage of the local demand. Much also is used in making cardboard and the coarser varieties of paper, not only in wrapping, roof paper and wall paper, but in such grades as registry and bond, Canadian makes of which are rapidly driving out the British product.

A marked impetus to paper-making in Canada was the legislation of the Ontario Government imposing an export tax on logs. The recent reorganization of the "Soo" industries, which collapsed under the wildcat financiering of Clergue, is another chapter in the story, additional leaves of which are the recent establishment of a $2,000,000 pulp and paper mill at Fort Frances, and a million dollar plant at Dryden in New Ontario.

In paper shipments abroad Canada has made striking advances. The following figures are eloquent enough.

Value of Unprinted Paper Exported to Great Britain.

1898.	1900.	1902.
$16,780	$490,794	$402,259

The value of Canadian paper exports increased in five years 2,500 per cent. That of the United States decreased 11 per cent. This again is partly due to the tremendous home consumption of the United States, which must always have an expanding influence on Canada. In 1903 Canada shipped to the United States wall paper worth $45,485. The trade with Australia, judged from recent enquiries from Australian firms, is bound to increase rapidly, more especially in butter paper. The trade with Japan is even more economically certain with the exploitation of the British Columbia pulp areas. Finally much depends on Canadian legislation affecting the exportation of pulpwood and pulp, and an increased market in the United States for Canadian paper.



THE JAS. SMART MFG. CO., LTD., BROCKVILLE.

Much also depends on an increased local demand based on the growth in population.

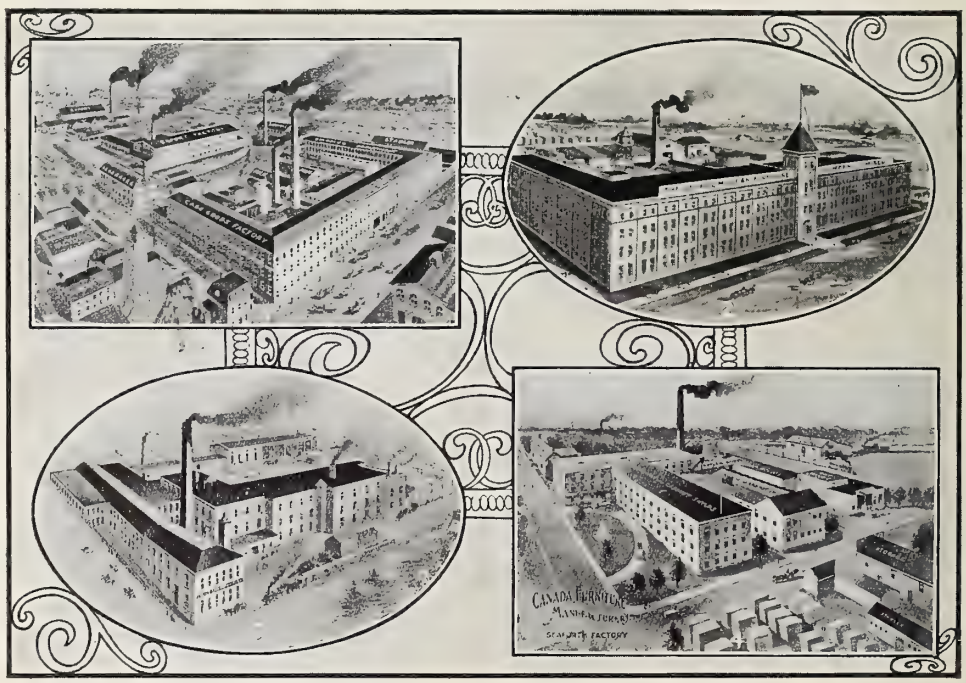
All things considered, the future of both pulp and paper in Canada is exceedingly bright.

FURNITURE.

Furniture manufacturing in Canada represents a century of development. Canada now contains 169 furniture factories. These factories are valued at nearly $8,000,000. They employ nearly 7,000 hands, and distribute annually more than $2,000,000 in wages. Their annual output is valued at nearly $8,000,000.

The furniture industry in Canada occupies a rather unique relation to the growth of the country. It represents a story replete with contrasts: first between the old and the new in production, the hand method and modern machinery; second, the old and the new in evolution, from primitive tastes and crude styles to the elaborate and the ornate; third, from an early abundance of native wood suitable to the pocket and the taste of the purchaser, to the importation of fine woods, keeping pace with a rapid advance in luxury, and making the Canadian furniture factory a market for other countries.

A country which adds rapidly to its population, and to its wealth and per capita purchasing power in an even greater ratio, and that starts on the race in the development of large cities and big towns without appreciably increasing its imports of furniture, may be looked upon as a furniture producer of the best class. A comparison of the following statements will demonstrate that Canada has learned the lesson or self-help in the highest degree from her workers in wood.



1 and 4. Canada Furniture Manufacturers Ltd., Woodstock and Seaforth.
2. The George McLagan Furniture Co. Ltd., Stratford. 3. The Office Specialty Co. Ltd., Newmarket.

In 1904 Canadian factories turned out—based on a legitimate increase over the census figures of 1901—not less than $7,500,000 worth of furniture. In 1904 Canada imported furniture worth $582,292. Therefore the imports of furniture, 80 per cent. of it from the United States, were equal in value to only about 8 per cent. of Canadian furniture manufactures.

These statements epitomize the fact that Canada has taken rank as a furniture manufacturing country, not only on a large scale, but on a scale commensurate with the development of fine art in furniture. Being largely a wooden country, there was really no excuse for Canada failing to count the furniture factory as one of her leading economic assets. The early settler laid the foundation for its establishment when he made his own table, chairs and bed for his log house in the clearing. The main problem then was to get a plane surface supported on four legs. This is the only furniture problem still in some shacks up in the lumber woods or the northern wheat lands and the mining camps, where factories never hum. But to make the highest class of modern furniture demanded by both use and fashion in a big city is a swing to the other extreme. These extremes meet in the Canadian furniture factory.

Thirty Years of Progress in House Furnishings.

Furniture making in Canada has been coincident with the evolution of the Canadian home. A generation ago the majority of Canadians lived in the country. Simple tastes were dominant. It was the era of the wooden bedstead, the hand-made deal table and the heavy common chairs. To furnish an average country home meant to buy a dozen chairs, two bedsteads, two tables, one for the kitchen and one for the dining-room—whenever there was one—and occasionally one for the parlor if that also happened to exist. A cupboard served all the purposes of both sideboard and dresser, even before the common bureau came in. The local cabinet maker was able to furnish almost everything required in the way of heavy furniture for the village and the farmhouse.

The average Canadian home to-day is a vastly different institution. Travel on the part of townspeople and social intercourse among country folk have widened the sphere of luxury. Tastes have developed coincident with the means of gratifying them. In its day the primitive furniture factory was an immense taste developer. The home-made or village-made article was solid and substantial, but it lacked finish. The manufacturer employed skilled labor and division of labor. A degree of style and finish became possible at not much greater cost than the plain article made in the old-fashioned way. And as there was unlimited wood in the country the evolution of the furniture factory began at rather an earlier date than most other industries. For Canadian people were learning how to furnish homes.

After a few decades of home evolution the direct economic relation between the home and the furniture factory became established. The parlor became a fact in the farmhouse, and the drawing-room in the city and the town. To-day the best city homes of Canada will compare favorably in style and in luxury of appointments with the best homes on the continent. As there was more ground-room per capita than in older and smaller countries, and as building materials were then cheap, Canadian houses were built on a large scale. This meant more furniture per head of population. To-day an inventory of the average city home, of the average town home, and of nearly every home in the country districts, would show that the furniture in these homes is the exclusive product of Canadian factories, employing Canadian labor and still manufacturing largely from Canadian woods.

The most common and elaborately furnished office contains desks and chairs made in Canadian factories. The most stylish church, the most modern school, and the most elaborate theatre are equipped from Canadian factories. The largest and finest hotel in Canada, and one of the finest on the continent, has been furnished almost exclusively from the products of these factories. And no matter what the luxury, or the specialty, the Canadian factory is found able to supply the demand, except in the purely fanciful or the archaic.

Importations of Wood.

As regards art furniture, so rapidly has the demand outgrown the supply, that manufacturers have been compelled to go abroad for high grades of woods and veneers which cannot be procured in Canadian forests. In former years people were satisfied with maple, elm and beech stained to imitate oak or walnut. Normally such imitation woods would not have been materially cheaper than real oak and real walnut. But Canada's real oak had gone abroad, most of it into British ships, and the walnut, once considered a nuisance by the settler, had been used for rail fences and log houses. Only three years ago there died in Kent County, Ontario, a farmer who confessed to the writer that he had been born in a log house built of solid walnut. Unable to make tables out of fence rails, the Canadian furniture maker was forced to send abroad for material in fine woods.

In 1904 Canada imported for purposes of manufacture as follows:—Sawed boards, $176,079; lumber manufactured, $63,372; veneers of wood, $149,222; cherry, chestnut, gumwood, hickory and whitewood, $437,419; mahogany, $138,388; oak, $1,492,577; rosewood, $2,397; Spanish cedar, $4,630; walnut, $57,770; white ash, $97, 479; teak, ebony, etc., $6,473.

These imports were for all purposes, and not specifically for furniture making alone. Much of the oak, for instance, which bulks to more than all others combined was used for house-finishings, piano and organ building, etc.

The Modern Furniture Factory.

Manufacturing high-grade furniture from such materials has called into requisition the most modern improved machinery. Perhaps the most important recent development in the furniture trade has been the inauguration of more complete and scientific methods of making. For general purpose lines it is certain that no factories anywhere are able to produce better or cheaper goods than these factories. In most of the more finished lines the same may be said. Canadian workmanship, skill and capital invested in labor-saving and perfecting machinery are in the very forefront of the world's making of high-class furniture. Makers have spared no pains, travel and expense to study foreign and fashionable models. They have made it possible for the connoisseur in art furniture to buy such from mills in his own city or town and to a great extent made from Canadian wood. In many cases this has been achieved at an enormous expense.

A large furniture factory such as one of scores which may be seen in Ontario towns and cities is no longer a sort of refined planing-mill, such as it used to be in the early days when a few saws and lathes, and a row of hand-benches, carpenters' tools, paint pots and brushes comprised most of the plant. The modern factory is usually among the very largest institutions in the place, often four stories in height, and nearly always built of brick. Inside it is a cosmos of specialized activities beginning with the lumber department downstairs with its saws and planers, and on through all the intermediate grades until a plank from the forest becomes a piece of high art furniture on the top floor, polished, grained and upholstered, ready for the most exquisitely appointed home.

Speaking generally it may be said that the perfection of manufacturing plants in Canada has reached high-water mark for the present at least. With an abnormal scarcity of houses in nearly all towns and cities, the local demand for furniture cannot now keep pace with the increase in population. This, of course, is largely offset by the expansion in population westward. Most of these settlers, however, do not for a term of years require anything but common furniture. Many of them—particularly those from the United States—bring furniture with them as settlers' effects. In the course of a few years the increase of home-building in that new country will duplicate that of older Canada at an earlier period. With the rapid extension of industrial centres in the east to cope with the demands of the west, a much larger local market for furniture must develop. This, of course, must for a time at least, and in some respects forever, be offset by the fact that labor is high and that raw material is constantly getting higher.

The Threatened Over-Production.

With the recent enormous production of furniture in Canadian factories there has arisen an over-accumulation, to cope with which factories have been running on slightly reduced hours. This does not affect the manufacturers of such specialties as mantels and grates, springs and mattresses, iron and brass bedsteads and office furniture. In all special and distinctive lines there is still an expansive tendency. In general lines some stringency has been felt. This has been ascribed by some to the undue accumulation of factories, many of which were made possible by a high tariff under the National Policy, and many bonused into existence by small municipalities. With the lowering of the tariff, foreign competition has lessened profits, without appreciably lessening cost of production. In the case of bonused factories, some have been subsisting on the bonus. Once there was in Ontario a feverish fashion of bonusing industries, especially those which employed skilled labor. The fashion is happily dying out. In one small city in Ontario, within the past decade, two mammoth furniture factories have been established. Neither asked for a bonus, but each got a loan from the municipality at 6 per cent. and a 20-years' exemption.

In general terms it may be said that the trade is simply suffering from its first attack of congestion. This has been partly met, if not obviated, by the formation four years ago of the Canada Furniture Manufacturers, Ltd., which is in the nature of a syndicate to prevent over-production. The present condition, at all events, has served as a wholesome object lesson, and the future history of the furniture trade in this country will without a doubt demonstrate the existence of sounder and more careful economics. Many of the brainiest and most practical men in the country are engaged in the trade, men who have studied the furniture business from the carpenter's and cabinet-maker's bench up. With a certainty of expanding home markets, these men may be expected to cope with the situation and to develop not only a larger trade at home, but a freer movement of Canadian furniture abroad.



THOMAS ORGAN AND PIANO CO., WOODSTOCK.

MUSICAL INSTRUMENTS.

On a spot in Toronto, Ontario, which forty years ago was a down-town commons full of marsh and scrub, now stands a church containing a four-manual, hundred-stop pipe organ, costing not less than $40,000. That organ was made in Canada. One quite as big and almost as costly, made by a Quebec firm, stands in Notre Dame Cathedral, Montreal. This also was made in a country which a century ago still echoed to the Indian's tom-tom.

In no line of industry has the progress of Canada in the self-manufactured arts of civilization been more evident than in the making of musical instruments. The best church organs in Canada, numbered by scores, are the direct and exclusive work of all-Canadian firms. In upright pianos there are at least seven makes in Ontario alone which are equal to the best made on the continent, and the superior of all but a few choicest makes. Even were quality alone to be considered, representing long and persistent study, the most skilled workmanship and the most modern methods of production, the manufacture of pianos and organs, not to mention other kinds of instruments, would stand as a monument to two generations of progress in Canada.

From Reed Organ to Pipe Organ.

The development of art in a new country is necessarily slow. Canada has had her full share of obstacles. Settlers of a century ago had what music they might get from an English clarionet, a flute or a little flat piano brought across the ocean. The majority of our forbears had to be content with the wind in the forests, the howling of wolves, and the strenuous hymn raised at the Sabbath meeting by one of the musical brethren.

Cabinet organs, of course, preceded pianos. Canada owes a big debt to the little reed organ. The first of these civilized instruments that came into general use in this country were made in the United States. They were good ones—principally two makes: one from Vermont, the other from Massachusetts. Scarcely larger than a street hurdy-gurdy is to-day, they ran into hundreds of dollars each. Few could afford such luxuries. When one came into a settlement it was an occasion for a general rejoicing.

Study of these excellent instruments may have had much to do with the pioneer makes of reed organs in Canada. Fortunately they were mostly of wood, and of that there was no lack. The little organ shop soon became an institution in the small towns and villages. They grew into factories. Most of the factories are standing to-day, some of them mammoth institutions five stories in height. One which sends its organs into half the civilized countries of the world occupies two blocks in a small city in Ontario. From the making of reed organs these factories developed first into the manufacture of small pipe organs, later into piano-building.

The Canadian piano is less than seventy years old. When the first ones were made, Winnipeg, now the Chicago of Canada, was a Hudson's Bay Company fort. The last ten years represents a cycle of phenomenal expansion. There are in Canada to-day twenty-five piano factories, either exclusive or in combination with parlor and pipe organ factories. The aggregate output in 1904 was not less than 15,000 instruments. The value of these, at an average cost to the purchaser of $250, amounts to $3,750,000. Of this output, Toronto alone, with eight firms, produced about 66 per cent. Taking Toronto as an analytical base, the distribution of the output according to firms and the development of a single decade are both contained in the following:

A Decade of Development.

Firms.	1894.		1904.	
Firms.	Pianos Made.	Hands Employed.	Pianos Made.	Hands Employed.
A	1,560	150	3,120	300
B	728	100	1,820	205
C	783	60	2,180	180
D	312	40	1,300	125
E	260	25	1,040	100
F	156	15	884	90
G	208	15	780	60
H	——	——	416	60
	4,007	405	11,270	1,120

In ten years the annual output of pianos in Canada has increased 300 per cent., and the number of hands employed has been multiplied in about the same ratio. This is a page in the spelling-book of luxury, and a fair indication that Canadians as a people have not only the taste but the practical means for the refinements of life.

Imports of Pianos.

Let us briefly compare this with the imports of pianos. In 1902 they were valued at $105,347; in 1903, $126,931. Which means that the total value of pianos coming into Canada under a 30 per cent. tariff is about 3 per cent. of the value of the home-made product; and these 600 or more instruments were mainly of the cheaper varieties, with an occasional grand piano. Canadians no longer need to go abroad for the very best makes in uprights, cabinet grands or baby grands.

As the United States duty on pianos is 45 per cent., it is not surprising that the number of pianos exported from Canada in 1903 was only 367—just about one a day—with a total value of $65,299. And even though the duty were levelled to the Canadian rate the home market is expanding rapidly enough to absorb all the surplus energy of manufacturers.

Now as to importations of semi-manufactured material in "parts," the following statements are suggestive:

Pianos, parts of, imported in 1902..... $153,499
Pianos, parts of, imported in 1903..... 140,187

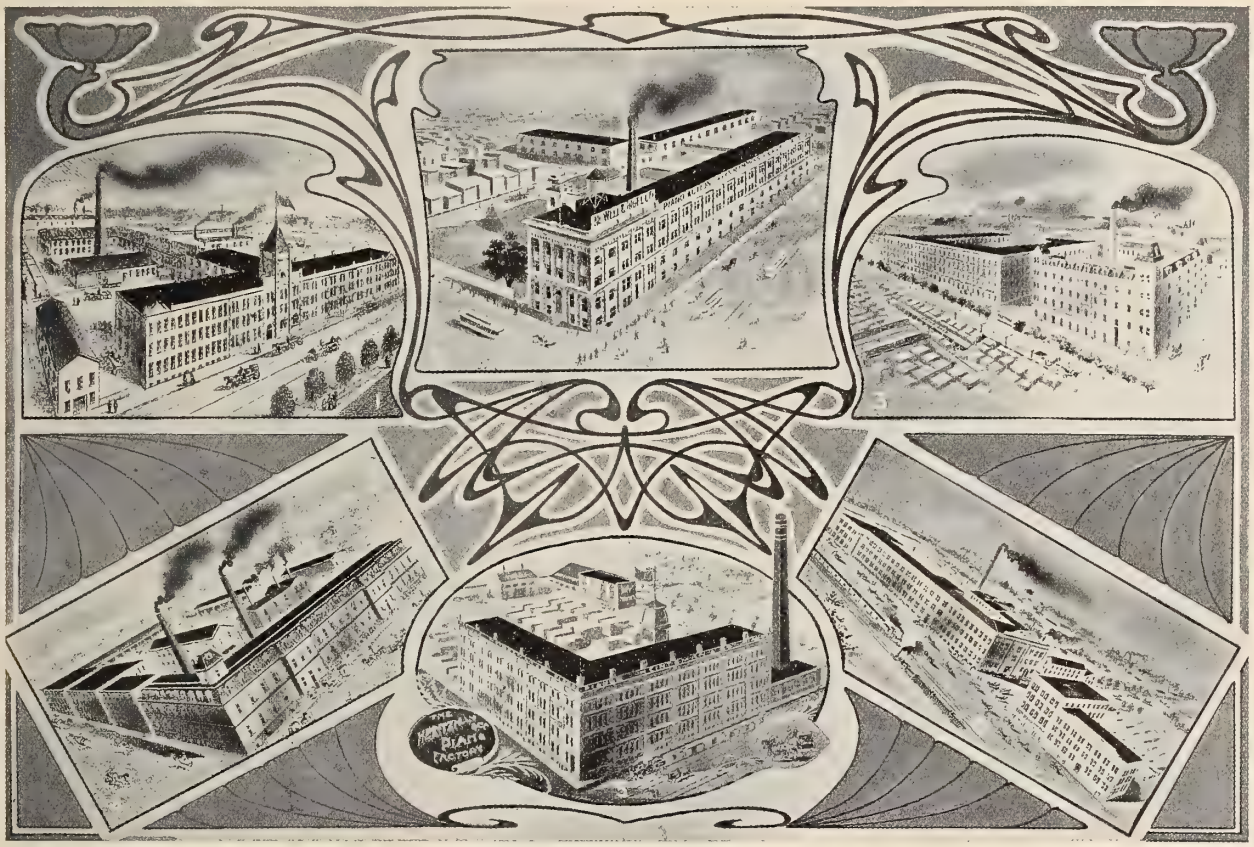
The value, therefore, of imported "parts," being actions, keys, strings, etc., in 1903, was but 3 per cent. of the approximate value of all manufactured pianos for that year. This will explain the suggestive fact that there are now five firms in Canada making piano actions, strings, keys, etc., employing in 1894, 121 hands; in 1904, 355 hands. Their business is constantly increasing, and their premises are being enlarged. Imported actions are steadily becoming fewer in number; some day they may vanish altogether.

The Piano a Barometer of Culture.

Generally speaking, it may be said that the piano in Canada is driving out the reed organ. This is notably true in towns and cities, and beginning to be a characteristic of the Far West. Organs bought for $125 ten years ago are being exchanged in carloads every day for pianos. Pianos bought ten years ago are being exchanged for better pianos. This is an evidence of growing culture and of a prosperity able to afford luxuries. Manufacturers who a few years ago turned out only organs have added piano factories to their plants. The piano factory addition has outgrown the organ factory which is now the appendix. Makes of pianos have multiplied. Standard makes—and of these Canada has a large number—have been refined and perfected into almost ideal instruments, able to stand the most critical tests. Two firms in Toronto sell no piano less than $450. Another is

now making expensive uprights with inlaid cases, costing $800 each. All the leading firms make grand pianos. Inventions have been added along the most modern artistic and mechanical lines. New styles of pianos, with improvements before conceded to be impossible by United States makers, have been introduced by Canadian makers, whose instruments now range from the finest grand to the so-called "commercial" piano, which is doing its large share of driving out the reed organ.

The most radical change in piano-making occurred years ago when the old square piano was abandoned for the upright. This called for changes in actions, frames and cases. The latest modern machinery has been installed in the leading factories. The great labor-saving improvements have been in the making of cases. Where forty years ago the handsaw, the jack-plane and the sandpaper converted planks into a piano case, the buzz-saw, the steam planer, the steam polisher and the steam finisher and the hydraulic press for putting on veneers have reduced the building of cases to an exact science, and rendered possible the enormous yearly output of 15,000 pianos. These improvements save the labor of hundreds of men. They were absolutely necessary in order to cope with the rapidly-growing demand and the extension of markets. Yet more hands than ever before are employed in order to keep the supply up to the requirements.



1. The Williams Piano Co. Ltd., Oshawa. 2. The Otto-Higel Co. Ltd., Toronto. 3. The Bell Piano and Organ Co. Ltd.. Guelph.
4. The Dominion Piano and Organ Co. Ltd., Bowmanville. 5. Heintzman & Co. Ltd., Toronto. 6. The D. W. Karn Co. Ltd., Woodstock.

Evolution of the Organ.

In the manufacture of organs Canada has a distinctive record. The range is to-day from $40,000 to $65, with just about every kind of instrument between the two extremes that it is possible to make out of reeds, bellows and keys. Canada manufactures pipe organs, in various sizes, down to $1,000 each; cabinet organs in styles even more numerous than pianos, vocalions, pedal reed organs for small churches, combination pipe and reed organs and compensating pipe organs. This is a long step from the yellow-keyed, spindle-legged melodeon, with two stops at each end and none in the middle. There are in Canada eight firms making pipe organs. The demand for their output is rapidly expanding. Two of these firms are mammoth concerns, making organs as good as any on the continent. Both have crossed the border into the United States in spite of an almost prohibitive duty. The world's greatest organists have performed on these Canadian-made instruments and found nothing to criticize, but much to admire. In the smaller makes of pipe organs there is a rapidly-increasing demand, with new churches going up in the west and north, and small churches being enlarged. A score of firms are making reed organs which still do pioneer work in rural districts and in the west. The output of these factories is constantly increasing, in spite of competition from the cheaper grades of pianos.

In band instruments Canadian makers are not behind-hand. Several firms are engaged in this specialized branch of the business, two of them being within a stone's throw of each other on a main street of Toronto. Most of their output supplies the home demand, which, of course, in the very finest lines is still supplemented by importations from leading European houses.

Among the fine arts none is advancing so rapidly in Canada as music. This has passed beyond the experimental stage. There are twice as many students of the piano in Toronto as in any city of its size on the continent. Four colleges of music, not to mention the scores of private teachers and more than a dozen ladies' colleges, are constantly turning out an increased number of pupils, augmenting the annual demand for musical instruments.

This is the flower. The branches and the roots of the tree must be found in the country at large; on the prairies of the North-West, where in little wooden houses may be seen pianos and organs sent from the east; in the small towns and villages and rural sections of eastern Canada, where a similar story is in constant process of making.

MILLING.

The Canadian milling industry ranks, in the value of its annual output, second only to that of lumbering. Out of a total of some 2,500 mills, scattered from the Atlantic to the Pacific, fully 200 have capacities of over 200 barrels per day, whilst the largest mills are capable of producing from two to five thousand barrels every twenty-four hours; and one company, with its three mills, has a total daily capacity of thirteen thousand barrels. The value produced has increased annually. In 1871 the output aggregated $39,135,919. In 1881 the total was $41,772,372, and in 1891 it grew to $52,423,286. A conservative estimate would place the present output at $70,000,000.

Milling, Past and Present.

Like the lumbering industry, the production of cereals began at the earliest period of the country's history. Our forefathers, the first settlers, did their own milling. For the purpose a hollowed-out stump, with a hand mortar, or a primitive grinding machine operated by hand, was used. But with the growth of settlements, small custom grist mills appeared. A few of the older farmers still living in Ontario can tell how, in those days, they travelled on horseback for many miles through the forest to the grist mill, bringing a couple of sacks of grain slung across the horse's back, and returning with their load considerably lightened by the miller's toll.



The Tillson Co., Ltd., Tillsonburg.

From the custom grinding mill to the modern flour mill of 5,000 barrels daily capacity has been a process of natural evolution. The industry is based on Canada's greatest natural asset —agriculture; and its progress has gone hand in hand with the development of grain production. Recently it has been stimulated by the opening up of vast areas of fertile lands in Western Canada, the productive capacity of which suggest possibilities in the manufacture of flour heretofore undreamed of.

Milling in Ontario.

The milling industry may be considered in two divisions—the first comprising Ontario ad the rest of Eastern Canada, and the second, Manitoba and the North-West. In Ontario there are a good many well-equipped mills, ranging from 1,600 barrels daily capacity, downwards, which, besides grinding wheat grown in the province, also turn a good deal of Manitoba wheat into flour. The milling of Ontario wheat has undergone various vicissitudes, according to the success or failure of the crops; but, notwithstanding reverses, the millers are prosperous, for they have succeeded in reducing the cost of production to a minimum, while bringing their equipment to a high state of perfection. In addition to supplying local needs, some of the larger mills ship extensively to Newfoundland, the Maritime Provinces, and such parts of the country as have no mills, and also export a considerable surplus to Great Britain and other countries.

The milling of purely Ontario wheat, however, may be said to have reached its limit, as there is now ample milling capacity to provide for whatever crop the Province may produce. To this an exception must be made in the case of Northern Ontario, a new country just being opened up. New Ontario, as it is called, has big possibilities of grain production, containing, as it does, many thousand square miles of good agricultural land.

The Wheat Lands of the West.

No survey of the present situation, or the future outlook of the milling industry in Western Canada, would be at all adequate without first a consideration of the grain-growing capacity of that wonderful country. Ten years ago Western Canada was practically ignored in the wheat and flour markets of the world. To-day, Mr. William C. Edgar, editor of The Northwestern Miller, Minneapolis, is authority for the statement "that the supremacy of the United States as the world's granary will in the near future be overthrown, and that to Western Canada will belong the honor of being the chief province of the King of Cereals."

In 1904 the total wheat crop of Western Canada, under somewhat unfavorable conditions, was about 60,000,000 bushels; the total wheat acreage about 3,130,000. It is estimated that the total acreage for next year will be close to 4,000,000. This is a gain of more than 300 per cent. in ten years. The average annual increase in acreage has been about 230,000. Should this be kept up, 2,300,000 acres will be added in the next ten years. The rate, however, should be larger than in the past. Until the latter part of the nineties immigration into Canada was small. Now it is large, and is ever growing larger. When the Western States were being developed the wheat acreage increased about 1,000,000 acres a year. A conservative estimate of the probable rate of increase in the Canadian West would be about 300,000 acres a year during the next ten years. That would give an acreage of about 7,000,000 by 1915, and a crop in an average year of 175,000,000 bushels.

The known and used agricultural region of Western Canada comprises a total area of 230,0000,000 acres. Of this region 170,000,000 is adapted to wheat raising. The United States, for example, has from two to three hundred millions of acres that will raise wheat, but only 50,000,000 have ever been devoted to wheat. In fact, in the United States, the wheat acreage is only about half the corn acreage. But Western Canada is pre-eminently

fitted for wheat raising, and the proportion of the tillable area that will be devoted to wheat will be much larger than in the United States.

If it be assumed that some day Canada will have 50,000,000 acres of wheat, it will produce far more wheat than the United States does now, for it is indisputable that the farther north one goes within the limits of wheat cultivation, the more bountiful is the yield. For the last twenty years the average yield of wheat in Western Canada has been 20 bushels to the acre. The average for the United States is about 13.6. At 20 bushels to the acre, 50,000,000 acres means 1,000,000,000 bushels of wheat. The largest amount of wheat ever raised in the United States was 750,000,000 bushels.

The Dawn of a New Era.

In the light of such figures it may be said that the wheat age of Western Canada is just dawning. With equal truth the same may be said of the flour age. In respect to milling, a most important consideration is that the quality of the wheat produced in the newly-settled country is just what the miller needs to strengthen and improve his flour. The announcement that the great milling companies of Minneapolis, in their distress for lack of good milling wheat, have turned to Canada for supplies, marks a new era in the history of the milling industry of the United States. Gradually, as the Northwestern States have become cultivated, the original hard spring wheat has grown scarcer. The two States of Minnesota and Dakota, which in some years have raised 200,000,000 bushels of wheat, are now turning their attention to dairying and stock raising, with their attendant crops, such as corn and root crops. Last year the value of other crops than wheat raised in Minnesota was greater than that of wheat by $15,000,000. The inevitable result of this process will be that the millers of the United States, in order to maintain an existence, will have to draw their supplies of hard spring wheat from Canada. But at the same time Canadian millers will have an important natural advantage as against their United States competitors in export markets, and there is no reason why in time Canadian mills should not grind all the wheat produced, particularly if an export duty on wheat is levied, as has recently been proposed.

Four years ago Canadian millers in the West were not on an equal basis with their United States competitors. Census figures in 1901 showed that Minnesota mills employed only 7.9 hands on an average, as against 8.5 employed in Canadian mills. But with less help the Minnesota mills had an average output of $163,800 each per annum, against only $79,850 for the Canadian mills. Again, with $24,000,000 of invested capital, Minnesota produced $83,877,000 of flour and bye-products, while Canada, with $14,000,000 of invested capital only produced an output of $31,835,000.

These figures show the lessons which the Canadian miller had to learn in 1901—the need of better machinery, more concentration, and the securing of a more steady supply of wheat. Although only four years have elapsed we have proof that the lesson has been learned, and that the milling industry of Western Canada has entered upon a period of great prosperity.

Some Milling Statistics.

The history of the milling industry in Western Canada began with the Hudson Bay Company, and very quaint and primitive some of its early mills were. The Mennonites who came from Russia brought with them several sets of small stones and erected windmills; but with the growing of wheat on an extended scale in a country where water power is scarce, steam mills were a necessity, and these sprang up all over the country and are increasing rapidly. Outside of Winnipeg there are 91 mills with a daily capacity of 10,595 barrels. The Ogilvie Milling Company's mill at Winnipeg, of 3,000 barrels capacity, brings the total capacity up to 13,595 barrels. Of the 92 mills, 61 are in Manitoba and 31 in the Northwest Territories.

Two Canadian milling companies that are known the world over by their export trade are the Ogilvie Milling Company and the Lake of the Woods Milling Company. The first named is regarded as the largest milling concern in the British Empire. The daily capacity of its three flour mills, situated at Winnipeg, Portage la Prairie and Montreal, is 10,500 barrels; of its corn mills, 2,000 barrels; and of its oatmeal mills, 450 barrels, making a total yearly capacity of 4,726,750 barrels. The daily consumption of wheat is 52,500 bushels. The company owns 120 elevators in different parts of Manitoba and the Territories, with a total storage capacity of 7,000,000 bushels.

The flour mill of the Lake of the Woods Milling Company at Kewatin, 130 miles east of Winnipeg, has a capacity of 5,000 barrels per day, and with the improvements made recently is one of the most up-to-date mills on the American continent.

Export Trade.

Canada's exports of flour have been steadily growing during the last five years, and with the present enlargements under way it is probable that the immediate future will see a much greater expansion. Last year's exports show an increase of 14 per cent.



The Ogilvie Flour Mills Co., Ltd., Winnipeg.

as compared with 1902, and, compared with 1901, more than 21 per cent. The following table shows the figures for the last five years:—

Exports of Flour.

1900	$2,791,885
1901	4,015,226
1902	3,968,850
1903	4,699,143
1904	6,129,226
Total, 1900-1904	$21,624,330

Last year's exports were distributed as follows:—Great Britain, $3,568,430; United States, $165,851; Australia, $45,893; British West Indies. $204,201; Newfoundland, $930,921; other countries, $1,215,719.

Great Britain affords the best market for Canadian flour. The demand there is estimated at probably $450,000,000 a year. Of this amount Canada supplies barely 2 per cent. There is thus a splendid field for development in this direction. Another direction in which the future will see a large development is in the Orient. United States mills are already shipping large quantities of flour to Japan and China.

Cereal Milling.

Within the last fifteen years there has been a very considerable development in Canada of cereal milling. In the term cereals are included oatmeal, rolled oats, split peas, cornmeal, pot and pearl barley, rolled wheat, wheatlets and numerous kinds of special breakfast foods. There are in the neighborhood of thirty mills in Ontario manufacturing these lines, some half-dozen in the North-West, one or two in British Columbia, and one or two in Quebec, with an occasional mill in the Maritime Provinces. They produce on an average one hundred barrels of oatmeal every twenty-four hours. Of their total product seventy-five per cent. is oatmeal or rolled oats.

DAIRY PRODUCTS.

The largest cheese ever made, unless the moon, as some people say, is made of green cheese, was made in Canada in 1893. This cheese was a sensation at the World's Fair and afterwards in England. A prominent cheese-maker in Canada advertises his cheese on toothpicks. These facts are mentioned, not because of their economic value, but because they suggest the possibilities that are epitomized in Canadian cheese. And certain it is that the commercial link between Great Britain and Canada could be inscribed not half so well on a monument as upon a piece of cheese. For Great Britain depends upon Canada for 72 per cent. of her cheese of all grades, and for the year 1903-04 the exports from Canada to practically her sole market for this product totalled 98,306 tons.

The inward economics which have placed this country as a dairy-exporter in the premiership over all other countries must be studied in progressive form as follows:

Ten Years of Butter and Cheese in Canada.

	1891.	1901
Number of Factories	1,736	3,580
Number of Employees	3,463	7,002
Salaries and Wages	$867,000	$1,503,482
Value of Buildings and Plant	1,968,174	6,315,410
Value of Products	10,780,879	29,731,922

The rough upshot of this decade of progress is a doubling of factories and employees, a trebling of the output, more than a trebling of the capital invested; and an increase in wages of more than 90 per cent.

Taking the value of products for two next years, this is the sequel:

	1902.	1903.
Butter	$ 5,660,541	$ 6,954,618
Cheese	19 686,291	24,712,943
Condensed Milk	.....	241,859

For 1904 the story is rather less rosy, owing to a slump in prices, but still highly encouraging; cheese made, 2,700,000 boxes, valued at $20,000,000; butter, 5,500,000 packages, worth $7,500,000, an increase over 1902 of nearly $2,000,000. In addition to this Canadians themselves consumed of creamery and dairy-made butter almost $4,000,000 worth.



The Eclipse Whitewear Co., Ltd., Toronto.

What has been the cause of this remarkable and ramified organization typified by the Canadian dairy cow, and standing only second in magnitude of output to the forest and the flour mill? Nature, government, science and experience. The history of butter and cheese in Canada is the history of co-operation and economic growth. The ancient Hindus worshipped the cow. Canadians have found a more profitable use for her, and have been irreverent enough to submit her to the most rigorous scientific tests to determine her fitness to occupy a leading place in our economic pantheon. The natural basis for this practical worship was a huge country eminently suited for the cow as once it was the home of the deer and the buffalo. Fine grass, running water, a cool climate, plenty of shade, abundance of grain and hay for winter feed, and an experimental knowledge of butter and cheese making bequeathed from the farmhouse—these are the fundamentals.

Dairying Past and Present.

But even with these natural advantages the dairying industry of Canada was once in a most nebulous condition. The writer's memory carries back to certain thrifty housewives who once made their own cheese. How they made it is not certain. As to butter, there are traditions antedating even the now antiquated dasher churn. There are people still living in Ontario who remember when to get a churning of butter the milk was poured into a leather bag, and the boy took a gallop with it on horseback. It went out milk and came home butter—of a kind. Even milkpans and skimmers were not invented in that primitive era. When the milkpan came the milkhouse went up, and the wooden churn with the dasher came in.

This was the era of hard work and of poor butter. It was also the era of the little wooden cheese factory, known by its smell for two miles when the wind was favorable. The factory was sometimes used in off years for harvest-home concerts and tea meetings; for it often happened that either a cheesemaker could not be had, or a dry year played hob with the water supply, or farmers had not raised enough hay and straw to tide over their stock in good condition, had but few calves and sometimes were driven by the memory of a low price for cheese the year before to boycott the factory and feed their surplus milk to the pigs and the calves. So that there came years when the milkstands by the roadside were only used as places to sit on and tell stories in the evening.

It was a long reach in imagination from the bald realism of those unregenerate days to that charming picture painted by George Eliot in "Adam Bede":

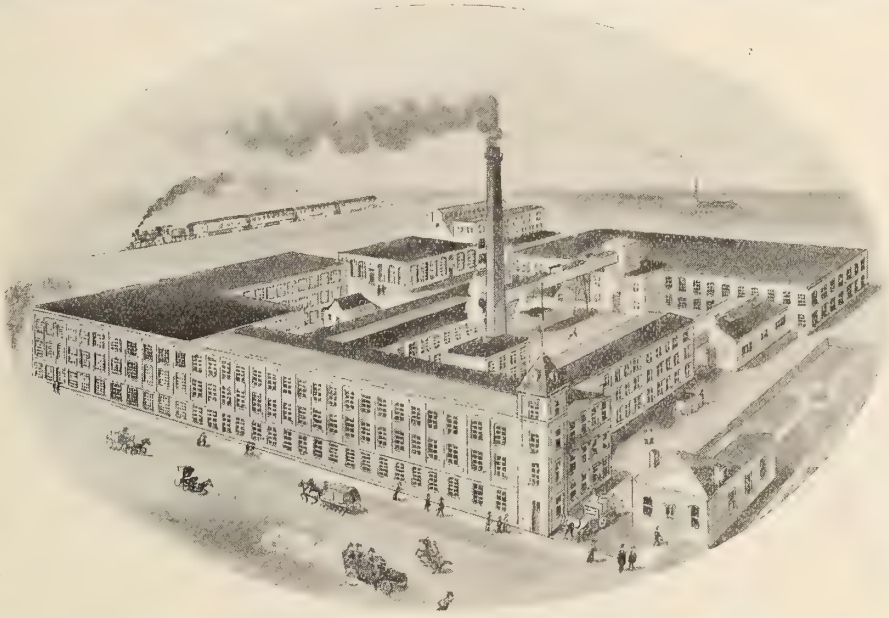
"The dairy was certainly worth looking at; it was a scene to sicken for with a sort of calenture in hot and dusty streets—such coolness, such purity, such fresh fragrance of new-pressed cheese, of firm butter, of wooden vessels perpetually bathed in pure water; such soft coloring of red earthenware and creamy surfaces, brown wood and polished tin, gray limestone and rich orange-red rust on the iron weights and hooks and hinges."

This was the English domestic dairy of George Eliot's day. Barring a few minor defects as to rust and a few changes in the way of implements, etc., its whole atmosphere is that of the modern mammoth Canadian cheese factory or dairy. There are exceptions; but it cannot be forgotten that the most remarkable

advance in the scientific business of making butter and cheese for Great Britain has been the expansion and consolidation on a commercial scale of that enticing domestic picture painted by the novelist.

In this transformation, Government has been a large factor. Here again the Agricultural College, the special Dairying Commissioner, and the Travelling Dairy School, with demonstrations and lectures almost without end and often in the face of the most discouraging apathy, have triumphed in the cause of pure butter and cheese. More intelligence is expended by science and governments, both federal and provincial, in Canada on the improvement of cheese and butter making than on any other industry known to the farmer. In the curing of cheese the employment of careful scientific methods has been remarkable. Much of the Canadian cheese must be made in June, July and August, with a normal temperature of 80 degrees F. To cure Cheddar cheese at such a temperature meant a loss of texture, weight and quality which seriously impaired the success of the article in the British market. Cold-curing was tried, but proved too expensive. By the modern process of cool-curing, now being adopted in Government institutions, the practical difficulties hitherto encountered by the manufacturer are entirely overcome.

Here is the acme of co-operation between the producer and the manufacturer. Here is the fruit of careful breeding of cattle which has been a volume of testimony to the dairy farmers of Canada, as well as to the scientific and practical tests in feeding, care and housing. Modern machinery has gone even to the farmhouse, so that the most advanced farmers, instead of waiting for the cream to rise and turn sour, separate it by hand or by windmill with a patent separator ready for the creamery can. The most painstaking patience has been practiced with the milk-producers to encourage and insist upon clean cans for milk and cream, upon clean stables and hygienic methods in handling.



The Hamilton Cotton Co., Hamilton.

The result of this schooling may be seen in the following remarkable statements which epitomize the progress of Canada's dairying interests.

Significant Statements.

In 1891 the value of dairy products ranked eighth in the Canadian list; in 1901 it stood third.

In the manufacture of butter and cheese in 1901, out of a total output valued at $29,462,402, $25,302,531 was paid to the farmer for raw material—86 per cent. of the value of the product. Of this Ontario farmers got 51 per cent.; Quebec farmers 44 per cent.

The number of factories making butter only in 1900 was 505; cheese only, 1,510; both butter and cheese, 264. Butter-factories were in operation an average of 191 days; cheese-factories, 159 days; combined factories, butter, 81 days, and cheese, 153 days. The production of butter in factories making butter only was more than four times that of factories making both butter and cheese; but the output of cheese from combined factories was nearly 150 per cent of that from factories making cheese only.

In the North-West.

Government, too, has taken long strides in the North-West, where at present butter-making is prosecuted on a large scale. A recent writer on the subject states that during the period from 1897 to 1903, 4,251,876 pounds of butter were made in the creameries of the North-West, and sold at a net value of $845,193.65, or an average price of almost 20 cents per pound. During the same period the output of butter at the largest creamery, at Innisfail, Alta., was 733,704 pounds, realizing the sum of $151,370.59, or an average price of 20.63 cents per pound. In addition to the creameries now in operation there are some eight private ones in Alberta doing good work, and apparently giving their patrons satisfaction.

Economic features of this branch of the industry are the abundance of fine grass, running water and cool weather. The home market in the interior in the Yukon and in British Columbia is growing at a tremendous pace. The foreign market in Japan also gives promise of a large expansion when it is recalled that before 1903 scarcely a pound of Canadian butter had gone into the Orient, while last year, even during the war, the exports of butter from Canadian Pacific ports to Japan amounted to 34,000 pounds from government creameries alone.

The Canadian Government have aided the steamship lines by subsidies to fit up refrigerating compartments which carry their goods to the English market in the best possible condition. A great many United States dairy products go by way of Montreal. Cold storage rooms are established in various parts of the province to which the cheese can be shipped from the factories to be cured. Refrigerator cars are sent to various parts of the province carrying dairy products at a very low temperature so that the goods may be laid down in Montreal under the most favorable condition. An instructor at Montreal examines the temperature of the cheese and butter shipped, and makes comments on the condition of the goods when placed on board ship. Reports are furnished to the dairy commissioner, so that they know from time to time what condition the goods were in when they were shipped.

The Outlook.

Considering natural advantages, organization, experience and the almost abnormal growth of the dairy trade in this country during the past few years, Canada's distinctive pre-eminence as a dairying country has no prospective limitations.

That during 1904 there was a slump in the value of Canadian cheese exports was due to no defect in supply conditions, but wholly to the state of the British market.

A variety of circumstances combined to bring about a total shrinkage for the year of more than $7,000,000. This was partially offset by a gratifying increase of more than $2,000,000 in our shipments of butter.

An adverse feature of the trade which all enlightened tradesmen, both exporters and importers, would be glad to see amended, is the holding of butter stocks both in Canada and Britain for speculative purposes. This practice, which has seldom or never profited either the exporter or the importer, always succeeds in depreciating the quality and the reputation of what was turned out of the factory as first-class butter.

PORK PACKING.

The Saxon wild boar may be famous enough in English literature; it scarcely requires the pen of a Scott to remark that the Canadian hog is still more famous in Great Britain. According to statistical traditions in 1904 the bacon hog of Canada figured in the imports of the United Kingdom to the extent of more than $16,000,000. This was rather more than one-sixth and less than one-fifth of the total British imporations of bacon for that year. Even Ireland, the proverbial land of the pig, has been beaten out of that greatest market in the world for bacon, and Denmark is beginning to take stock.

A country which exports practically three dollars' worth of bacon in a year for every head of population, must be conceded to know a good deal about pigs. Canadian pork has long been a household word—with or without beans. But there is a whole epoch of progress between the pork of pioneer days and the Canadian bacon of the twentieth century. Speaking from years of experience in helping to raise hogs of all descriptions, the writer is constrained to regard that epoch as no less than a revolution. In former days the Canadian farmer's pig was the general scavenger which in the course of three years ate about twice his own value when converted into pork. To-day the bacon hog is the highest type of the farmer's finished product and one of his surest sources of profit on a large scale.

The Old and the New.

At one time there were vast Christmas pig-killings on Canadian farms, when as yet pork factories were not much more numerous than asylums for the insane. Twenty pigs was reckoned a large killing. If one of the twenty White Suffolks or Berkshires tipped the scale at less than 200 pounds, he was classed as a runt and packed into the farmer's salt barrel. Some of these early leviathans that ate corn and peas and things in general went as high as 400 pounds each. Hung up by the gambrils and dressed, such a hog showed a solid side of fat (to use the farmer's own satisfied language) "a foot thick." Somewhere in the world there were people who liked that kind of pork. As a rule they lived in the lumber camps, where delicacies were not common. And the fatter the hog the more eager the buyer used to be to get him.

Ten years of more or less scientific hog-raising has put most of this on the list of things obsolete. The Canadian hog-raiser is no longer a mere keeper of hogs. He is a manufacturer. It is no longer left to nature, circumstances and the trough to produce the marketable hog. The farmer has been educated. What has educated him? Primarily his pocket; the fact that the Canadian hog as an article of food was not properly confined to the lumber camps. It was discovered that Great Britain consumed yearly almost $100,000,000 worth of bacon. Of this the United States, Denmark and Ireland were furnishing the lion's share. Why should Canada not enter the market? Pork-packers woke to the situation. Farmers' institutes did likewise. Both began to drum it into the farmer's head that the traditional 300-pound hog, all fat and a foot thick, was not the sort of delicacy required by British epicures. The desideratum was the bacon hog. Quality, not weight, was required; fibre not fat; flavor not durability; and all this meant the abandonment of the hog that lived through two winters and three summers, and taking up with the hog that considered itself lucky to see one of each.

The Canadian farmer has now a working conception of the hog that he never had before. Any Rip Van Winkle who could have gone to a fall fair twenty years ago and suddenly awakened to attend one in the twentieth century, would be certain of this amazing revolution, most of which has taken place during the past decade. Any man who will take a casual drive through an Ontario farming community might see the same story written in the hog-droves and hog-pens of Canada. Firmly rooted in the Canadian farmer's mind is the fact that he is not merely a producer of absolutely raw material, but a sub-manufacturer, carrying his product to the highest possible point of perfection before it gets to the factory. But for this revolution all the pork-packing factories in the world would have little effect on the sending of $16,000,000 worth of Canadian bacon annually into the British market.

So much for the dictates of the British consumer. But this is not all. Quick to learn from the experience of others the Canadian consumer also has become exacting. No better bacon is eaten anywhere than is bought by our most fastidious users in Canada. The retail trade has been revolutionized. A casual walk into any half-dozen butcher shops, provision stores or grocery stores is proof of this. Already one-third of the total annual bacon product of Canada goes to the home market. And so it has come about that whereas in 1891 the total value of the bacon output in Canada was $5,264,103, the output in 1901 was $22,217,984, or an increase in ten years of 400 per cent.

The economics of this are twofold: pictured first in the Canadian farmer's end of the industry, second in the pork factories of Canada. The root of the matter is in the farmer's hog-pen. Fifteen years ago the average Canadian farmer's hog-pen was a shack with a leaky roof; sometimes a boarded-off place in a cattle shed. From early fall till killing time the farmer's ten or fifteen porkers wallowed in filth and wasted half their feed by trampling it in the mire. They were coated with mud. The farmer said that the pig liked mud, and therefore mud was healthy for the pig. The feed was as crude as the keep.

Now what a change! It has been discovered that the hog is a cleaner animal than either the sheep or the hen. Given a chance and he will thrive on warmth, cleanliness and scientific feeding. The civilized hog is not a scavenger. He is an epicure. He is housed even more carefully than the horse. His pen is well-ventilated, dry, light and clean. His diet is studied.

The Canadian farmer has found that it pays to specialize on the hog. The farmer of twenty years ago, if he had raised more than a score of hogs would have been considered "hog poor." That anathema has passed. Many farmers now raise more than a hundred pigs each. The huge Christmas battues are a thing of the past. The hogs are sold live weight to the buyer, who comes around as regularly as the sewing-machine pedlar. The enterprising farmer sells almost every month in the summer or even the whole year, according as he has a bunch of hogs ready. Prices generally have been good the past few years, and for long periods have ruled high.

Meat Curing and Canning in Canada.

	Number.	Capital.	Employees.	Wages.	Product.
1891.....	62	$1484,288	921	$298,932	$ 5,264,143
1901.....	57	5,395,162	2,121	784,010	22,217,784

General approximate results—fewer and larger concerns, investment and output quadrupled, employees increased 120 per cent. and wages 160 per cent.

Inside a Pork Factory.

One well-known Canadian packing house employs 500 hands and kills, packs and prepares for local trade an average of 8,000 hogs a week. This is about one-quarter of the total slaughter and pack in the Dominion, the figures for 1904 being 1,650,000.

A plant run on so mammoth a scale implies consolidation of the highest type. In this huge factory, whose exports of Wiltshire sides are among the most famous in the British market, every ounce of energy in motive and mechanical power, and practically every particle of the hog, are utilized to profit. Wastage is unknown. From the slaughter-house to the scalding-room, to the "scutting" machine, from there to the huge singeing furnace, down to the scraping table, on to the dressing beams where there are five men, each with a special part to remove, all is perfect continuity, speed and system.



Where Ignorance is Bliss.

From this point the industry ramifies into the utilization of bye-products and the preparation of meat. These again ramify each into a series of related industries. After leaving the dressers, the hog is ripped down the back, passed on to the hanging-room with a capacity of 2,000 hogs, then to the cooling rooms kept at an average temperature of 40 degrees F. by a below zero solution of calcium chloride pumped up from an ammonia refrigerating plant below; next to the cutting rooms where the sides are cut and trimmed, the trimmings being passed on to the sausage department, the trimmed heads to the refining department. After this the trimmed sides are sent to the cellar for curing, thence up to the packing room, where, after a dressing of borax they are packed into 600-pound cases for shipment.

The bye-products department is more intricate and even more successful if possible than the manufacture of Wiltshire sides. Lard is the first factor—leaf, intestinal and incidental from the heads, etc. The leaf lard has already been stripped. The intestines are split by a machine, thoroughly washed, and passed on to the rendering tanks, where the lard is tried out and afterwards refined with a standard mixture with leaf lard. The tankage, consisting of liquids and solids from the tanks, along with blood from the slaughter-pen, is evaporated into fertilizer material, which is shipped out to the United States, where in combination with phosphates it is in keen demand for use on tobacco and cotton lands. Forty thousand tons of this were shipped from Canada last year. The hoofs go partly to the glue factories and partly to the fertilizer tanks. The hair is sent to brush factories. Livers, hearts, lungs and tenderloins are sold as meat in the stores.

In connection with this factory is a huge provision and smoke-curing establishment, which makes specialties of canned and tinned meats—pork, beef, mutton and chicken, also sausages and pork pies, all of which are sent out to a little empire of some fifty provision stores.

Compared to the United States—the great pork-hub of the world—it is found that Canada stands to-day for output just where the United States stood forty years ago. But the era of the Canadian hog has only begun. The hog follows population and agriculture. At present the centre of Canadian hog-raising is Ontario, just as once in the United States it was Cincinnati, and is now Chicago. There is no reason to expect that Ontario will not go on increasing her output of bacon in the same ratio as she has done the last ten years; but with the expansion of the market, new hog centres must develop. These are already beginning to develop in the North-West, for the product of whose factories already exists a large and growing market in British Columbia. It is merely following United States history to predict that the day may yet come when Chicago as a meat-centre will be duplicated on the Western plains.

Canadian vs. Danish Bacon.

Meanwhile, what is to be considered? Primarily, quality. For quantity, the United States is still our formidable competitor. For quality we have nothing to fear, but all to hope from our neighbors to the South, who are largely at the mercy of the corn-fed product. For quality, as has been noted, there is still room for a slight improvement compared to Denmark.

The words of Prof. Day, live-stock export at the Ontario Agricultural College, aptly sum up the situation and indicate the outlook. After pointing out that Denmark possesses three advantages over Canada as a bacon-producer, viz., uniformity, abundance of creamery bye-products, and closeness to market, he says:—

"With all these conditions against us, the question naturally arises, are we engaging in a hopeless competition, and will not the Danes eventually drive us out of the market? But there is another side of the question which I would like to present. At the time of my visit, the farmers were receiving at the factory a little over six and a quarter cents per pound, live weight, for their hogs, and they were complaining bitterly that the price was not high enough. The best authorities agreed in placing the cost of production at six cents per pound, live weight. In addition to this fact, a number of recently-constructed factories in Denmark have failed, and others are running at a loss, not being able to obtain enough hogs to make the business profitable. When these two facts are considered together, the reasonable inference is that as soon as the price of hogs drops to the neighborhood of six cents per pound, the Danish farmer curtails his operations, and fewer hogs are fed for market; and that unless a cheaper method of feeding is discovered, the Danes are not likely to increase their exports of bacon. In other words, it looks very much as though the Danes had very nearly reached their limit in the production of bacon, for the present at least. I need not say that Canadian farmers can make money at six cents per pound for their hogs, and it is right here where we score a very important advantage over the Danes."



In the Hanging Room—Capacity, 2,000 Hogs.

BISCUITS AND CONFECTIONERY.

Twenty years ago, the writer bought at a Canadian country store a pound of stick candies. The candies were eaten in the course of a three-mile stroll through the woods. It was not really necessary to buy stick candy. There was horehound also in that store, a few sticks of licorice and a few pounds of conversation lozenges. Had a lunch been bought at the same place it would have been confined to soda biscuits, one kind of crackers, and possibly a few ginger snaps. To-day in that same store, rebuilt and modernized, may be bought at least forty varieties of confectionery and as many, if not more, kinds of biscuit.

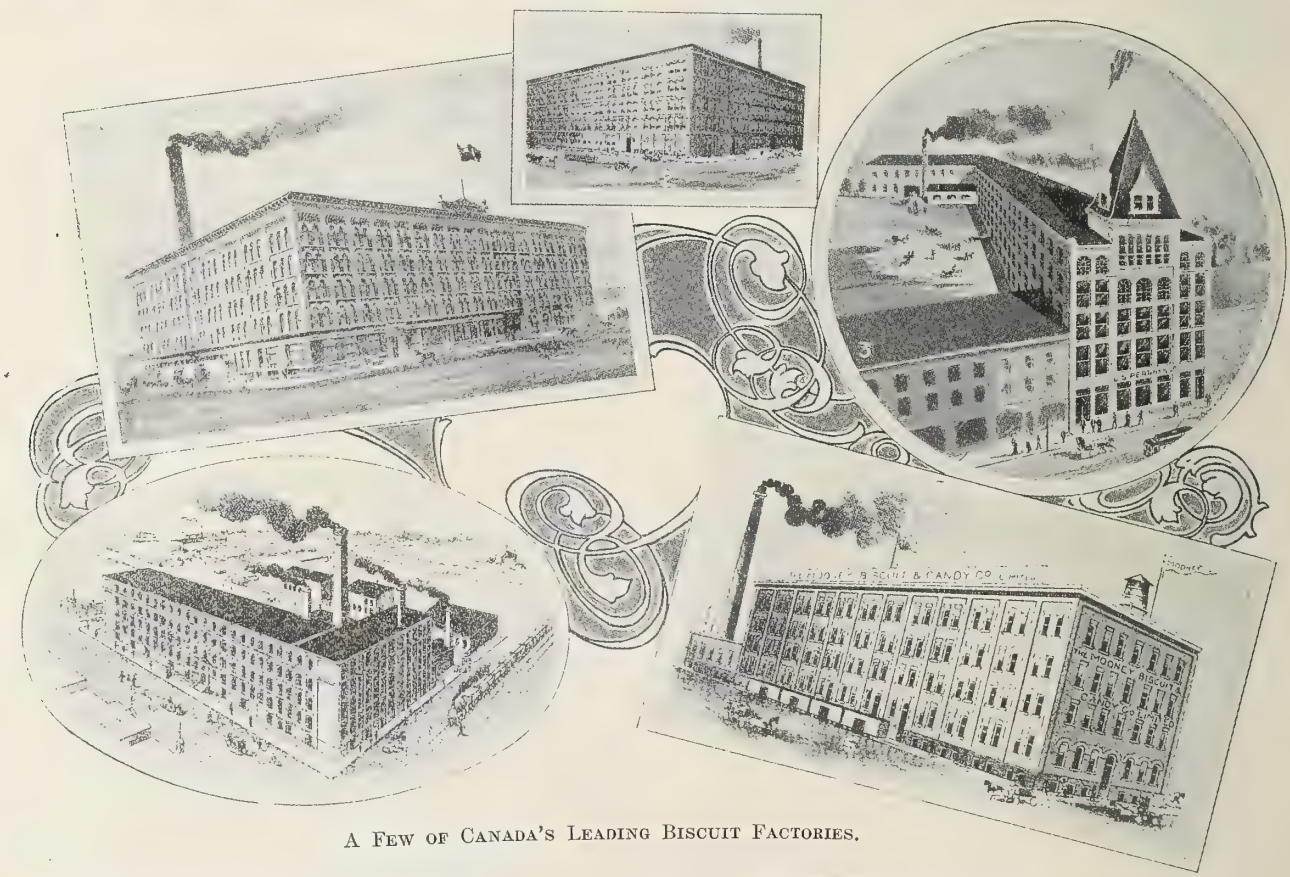
This is not to say that the only varieties of sweetmeats manufactured in Canada twenty years ago were soda biscuits, a few crackers and three kinds of candy, but it illustrates the fact that

Canadian Candy in 1860.

Common Drop Mixture	16c.	Chocolate Drops	24c.
Assorted Lozenges	18c.	No. 1 Hard Gum Drops	26c.
Bull's Eyes	15c.	Horehound	16c.
Rosebuds	16c.	Nonpareils	22c.
Almond Candy	22c.	Caraway Comfits	22c.
Conversation Lozenges	20c.		

Twenty and Forty Years Later.

	1881	1903		1881	1903
Stick Candy	15c.	8½c.	Lozenges, Convers'n.	18c.	10c.
Royal Mixture	17c.	6½c.	Chocolate Drops	23c.	10c.
Brown Mixture	13c.	5½c.	Creamed Almonds	24c.	12c.
French Creams	25c.	8c.	Coffee Almonds	24c.	20c.
A.B. Gum Drops	18c.	6c.	Caraways	24c.	15c.
Lozenges, Mints	22c.	10c.			



A Few of Canada's Leading Biscuit Factories.

1. Christie, Brown & Co., Limited, Toronto.
2. The McCormick Mfg. Co., Ltd., London.
3. D. S. Perrin & Co., Ltd., London.
4. Lang Manufacturing Co., Montreal.
5. The Mooney Biscuit and Candy Co., Ltd., Stratford.

the majority of people who at that stage of development lived in rural districts knew little or nothing about any varieties except sodas, crackers, ginger snaps, stick candies, horehound and conversation lozenges, with once in a while hard gum drops, peppermint and licorice. Twenty years before that, there were candy and biscuit manufactories in Canada, but as they were engaged in manufacturing for the urban population almost exclusively, they were necessarily small and their output comparatively meagre.

Canadians in those days were not a consuming people. A glance at a few prices of 1860 and 1881, taken from lists of wholesale houses, are suggestive.

In twenty years, prices had evidently not declined much. It was the era of scarce sugar. Canada now imports nearly 400,000,000 pounds of sugar in one year. This is an average of more than 60 pounds per capita, without reckoning Canadian-made sugar. So far as the writer's recollections of twenty years ago are concerned, five pounds of sugar a year would have been considered a large allowance—to a hired boy. Sugar was dear. The ordinary dark brown sort, half water, cost ten cents a pound; yellow, considerably more, and white was out of the question. Once in a while—about a week before Christmas—the grocery bill included half a pound of pulverized sugar, which, when it came, was regarded with wondering eyes, for it cost nearly 20

cents a pound and was used for nothing but icing the Christmas cake. Now the average farmer's wife uses little else but granulated sugar, and there are farmers not a few who buy a whole barrel at a time.

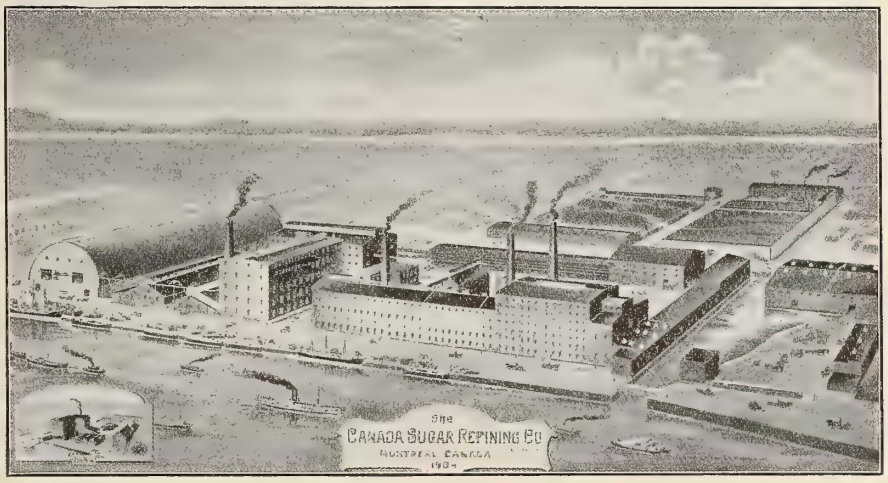
In the olden days, because sugar was dear and tastes were limited, the farmer's wife made all her own sweetmeats. These were—not including pastry—say one pound cake every six months, a sponge cake every week, a batch of cookies one week and a batch of ginger snaps or ginger bread the next, with once in a while on company days, a jelly-cake. These, with the periodical taffy made from brown sugar, and the maple syrup home made in the spring, were the whole category of sweet things. And so it was that Canadians living in the early days largely in rural districts, grew up a rather stern race not addicted to sugar.

Now there are made in Canada not less than 450 standard kinds of biscuits, with more than 200 special fancy varieties; also hundreds of kinds of candy, including the most delicate confections known to the human palate. Hence it becomes possible to write the following figures spelling our biscuit and confectionery trade for ten years of evolution:—

Bakeries and Confectioneries in Canada.

	Establishments.	Capital.	Employees.	Wages.	Output.
1891. . ..	269	$4,692,909	4,296	$1,346,046	$ 8,364,306
1901. . ..	258	6,996,204	5,858	1,807,805	11,637,808

Here it must be noted that the census of 1891 included *all* bakeries; that of 1901 only those employing 5 hands each or more. A full census including all bakers and sweets-makers must show a much larger increase, since the semi-domestic branch of the business is still a very marked feature. It will be noticed that the total value of the Canadian-made product in 1901 was almost $2 per capita of population, a sum which would have been considered a gross extravagance twenty years ago.



But the economic status of Canada's fancy breadstuff consumption must be judged partly by her imports, and, what seems rather a paradox in view of the contrast in evolution, her exports.

	1899	1900	1901	1902	1903
Imports.	$38,005	35,779	29,840	27,717	33,738
Exports.	$23,652	22,742	29,166	30,177	35,571

An obvious feature of these figures is that imports of biscuits have decreased in five years almost 12 per cent., while exports of the same from Canada have gone up more than 50 per cent. The total value of confectionery imported in 1904 was $238,093.

While so far as Spartan rigor of diet is concerned, the abnormal increment of sugar consumption may not be a good thing, an industry which represents an invested capital of nearly $7,000,000, and employs nearly 6,000 hands, must be considered a good national investment.

Overcoming Difficulties.

The economic obstacles to the development of this class of manufactures in Canada may be summarized as follows: cost of sugar, lack of fine grade domestic flour, scarcity of skilled labor and female help, scarcity of machinery, a disproportionate rural population engaged in manufacturing its own sweetmeats, and, until the last few years, a comparatively uncultivated taste for high-class products. These obstacles have been largely overcome. All the leading confectionery and biscuit factories in Canada are equipped with the most modern, expensive, and quickly productive machinery. In the manufacture of the very finest class of goods Canadian makers are able to compete with the most modern plants in any country in the world. Canadian biscuit ovens are marvels of mechanical genius; with the modern quick-firing oven, one mammoth factory in Canada turns out alone nearly 700 kinds of fancy breadstuffs. The same factory employs not less than 500 hands. The problem of help has been simplified. With the massing of population in large centres, female help, always indispensable for quickness, neatness, and relative cheapness, has become both plentiful and cheap. This same tendency to accumulate in cities and towns has developed a headlong demand for modern sweetmeats. The "sweet tooth," so rare in Canada thirty years ago, has become almost a national affliction. This, of course, spells a larger margin for luxuries over the traditional stern régime of a former day. More emphatically, it means that sweetmeat luxuries have been enormously cheapened in price. And even in farmhouses, where a generation ago were to be found no kind of breadstuffs not home-made, may now be seen many varieties of factory-made products, containing flavors that the most skilful housewife is unable to rival.

The Sugar Industry.

Taking the whole field of candy and biscuits, the supply of sugar has been always a dominant feature. In the days of dark brown sugar at ten cents a pound, the manufacture of high-grade candies at twenty-five cents a pound would have been an economic miracle. It is trite to say that with high-grade sugar at low cost, high-grade confectionery at modern prices has become established. Sugar-refining has long been a leading industry, and years ago attained large proportions in Canada. Taking the decade 1891-1901, the following are the figures for these industries, most of which are situated at Montreal:—

	Refineries.	Capital.	Employees.	Wages.	Output.
1891. . ..	7	$ 2,699,400	1,402	$509,811	$11,627,100
1901. . ..	4	10,104,585	1,200	612,680	12,585,000

The past three years has brought an enormous increase in the consumption of sugar, so the figures for 1904, if available, would necessarily present much larger dimensions.

On the other hand, however, it must not be forgotten that the past three or four years has witnessed the inauguration of a new industry in Canada in the manufacture of beet sugar on a large scale. Already three mammoth sugar factories are turning out sugar as good as the best imported. Two of these are in Ontario, one at Wallaceburg, and one at Berlin. The latest is in Raymond, Alberta, 2,500 miles to the north-west, and the precursor of many more that must ultimately arise in the Great West, with its deep, loamy soil and long summer days. This factory is as yet the smallest of the three, yet its capacity output for a full season's run is 10,000,000 lbs.

CANNING.

Once the Canadian farm lad picked raspberries wild in the woods and the farmer's wife "did them down" in glass jars. Perhaps ten quart jars was the whole summer's product, for it was hard work picking wild berries among the log heaps and along the rail fence corners. But that ten cans of "preserves," with a few grapes, gooseberries, citrons and black currants laid the economic foundation for one of the most typical industries of New Canada. The immense canneries of mostly everything but minerals, reaching in Canada from the salmon streams of British Columbia to the gardens of Ontario and the lobster factories of Nova Scotia, are Canada's big summer kitchen.

How this simple home-growing industry has developed into commercial dimensions may be seen at a glance in the arithmetic of ten years:—

Fruit and Vegetable Canning.

	Establishments.	Capital.	Employees.	Wages.	Value of Output.
1891	39	$ 523,683	2,205	$161,269	$ 866,842
1901	58	2,004,915	4,640	378,128	2,831,742

Dried Fruits and Vegetables.

	Establishments.	Capital.	Employees.	Wages.	Value of Output.
1891	30	$ 80,600	421	$30,025	$142,436
1901	50	371,321	1,525	104,228	395,540

Taking the first list it appears that the garden end of the industry has developed in ten years 50 per cent. in number of concerns, nearly 400 per cent. in capital, more than 200 per cent. in hands engaged, 230 per cent. in wages and more than trebled in output. This decisive evolution has been paced primarily by a rapid expanding home market in towns and cities, supplemented by a quick and encouraging export trade. Figures for four years' development are as follows:—



THE MAPLE LEAF RUBBER CO., LTD., PORT DALHOUSIE.

Exports of Canned Goods, not including Fish.

	1899	1901	1902
Meats, poultry, etc.....	$104,718	$423,045	$882,191
Fruits.....	293,660	181,829	403,558
Vegetables.....	19,934	43,566	118,013

This, merely as the surplus over what the Canadian consumer required, represents in four years respectively increases of 820 per cent., 36 per cent., and 590 per cent.

Lakes, coast-waters, and rivers teeming with fish, hills and valleys dotted with cattle, gardens and fields heavy with vegetables, orchards and shrubberies loaded with fruit,—these are the wholesale supplies of raw material for the canning factories of Canada. No industry is more general in its scope; none more simple in its methods. And there is none more purely local in its economic conditions. From field to factory is in the majority of cases but a few miles. Machinery and buildings are comparatively inexpensive. Labor being in many cases largely female or foreign, is a relatively small charge. The quality of the raw material is of a superlative standard. These are the bald factors that have made the canning industry of Canada take more strides in one decade than its woollen mills ever did in a generation. And the history of the canning factory in Canada is essentially a story of ten years.

Canned and cured fish has been the strong leader in this line. The reasons are not far to find; enormous water and coast areas, a large fishing population, nearness to markets and cheapness of transportation. Hence the following statistics culled from Canadian coastways:—

Total Exports of Canadian Fish.

1899	1902	1903
$8,718,053	$12,214,779	$10,014,298

Eighty per cent. of the gross exports of fish credited to our National Trading Account in 1903, consisted of three items,—codfish, canned salmon and canned lobster. Of these codfish is easily first in foreign favor. Two hundred years of a head start still enable it to out-distance all competitors, though the lobster and the salmon are steadily gaining ground. In 1903, the cod led by more than $800,000, while the two latter broke even at about $2,600,000.

Salmon Canneries of British Columbia.

Canned salmon by some epicures has been derided. By other epicures it has been glorified. Taste is an important item. The probabilities are that if canned salmon did not taste good the civilized world would boycott the biggest single industry on the Canadian coast. Aside from mere taste salmon has made a strong bid for first place as a food product. The Indians knew this centuries before a white man ever saw a sockeye salmon in the Fraser River. The white man knows it now from Yokohama to Liverpool by scientific analysis. The analysis shows this:—"Canned salmon contains as much protein as beefsteak, 60 per cent. more than eggs, and more fat than chicken, eggs or beef. Its food value is four times that of oysters. There is a very small percentage of waste in canned salmon as compared with fresh fish, and when eaten with bread or potatoes, a diet is obtained which will supply all demands of the human body."

Salmon are of five varieties: The sockeye, 8 to 10 lbs. each; the spring, 18 to 20 lbs.; the silver, 3 to 8 lbs.; the dog, 10 to 12 lbs.; the hump-back, 3 to 6 lbs. Of the sockeye alone, 2,948,333 went to British Columbia canneries in 1903.

The parish of the British Columbia salmon is 800 miles long. From the tumbling square leagues of the Pacific come these red and pink sea-fish up the inlets into the rivers to spawn. The movement is cosmic. The industry based on it though less than

thirty years old, is pictured in the multitudinous fisheries and canneries on the big rivers and the coves of British Columbia; in the fleets of boats, the spears and the nets; in the vats and the furnaces and the mountains of tins; in the Indians, Chinese,



Granby Consolidated Mining, Smelting & Power Co., Ltd., Grand Forks, B.C.

Japanese and whites—the four nations that catch and can the salmon for the tables of the world. Here are some items of the picture for 1901:—men employed in fisheries and canneries, 23,000; boats employed, 11,571; canneries, 67; value of salmon canned; $5,986,617; value of salmon salted, $338,358; capital invested in fisheries, $2,681,433; in canneries, $5,000,000.

So is it that the salmon of British Columbia has come to rival the Douglas fir as an article of export trade. Nature conspired to make the salmon the Can King of the world. Its arithmetic outstrips that of the buffalo of the plains. Unlike the buffalo the salmon shows no signs of extermination. Government stepped in before destruction came. The buffalo is now but a few scattered bones and a memory. The salmon is a great commercial fact and a huge industry.

The codfish and lobster fisheries on the Atlantic are perhaps less picturesque in their economics, but almost as important a factor in export trade. In 1901 the sales abroad of canned lobster were but $800,000 less than those of salmon. And if none but salmon, lobster and cod were sent out in Canadian cases, cans and barrels to the consumers of other countries, the fish exports of this country would deserve to rank as one of the big facts of commerce. This takes no account of the home market which, by reason of the increasing outpost population and the enormous distances to transport supplies, making canned salmon as well as canned meats a necessity, is becoming a strong competitor with foreign trade.

Canned Meats.

Canned meats in point of present importance rank next. Once and not so very long ago we had the era of corned beef, etc., when "etc." was just about an unknown quantity. Now the "etceteras" have put corned beef on the rear shelf in the pantry. The strenuous days of strong appetites have given place quickly to the epicurean age, in which so far as Canadian manufactured meats are concerned the following are the chief items:—Ready lunch beef, chipped beef, smoked beef, ham, pigs' feet, mutton, roast and boiled tongue, potted and devilled tongue, veal, chicken and turkey loaf, and jellied hock.

Therefore it is not surprising that canned meat exports alone from Canada increased from $104,718 in 1899 to $882,191 in 1901 an increase of 820 per cent. in 2 years. Canned pork and beans are not included in the above, but this is a useful and cheap article of vigorous diet that is steadily growing in favor, more especially in the home market. Canned soups also have become a staple here and are second to none on the continent.

Fruits and Vegetables.

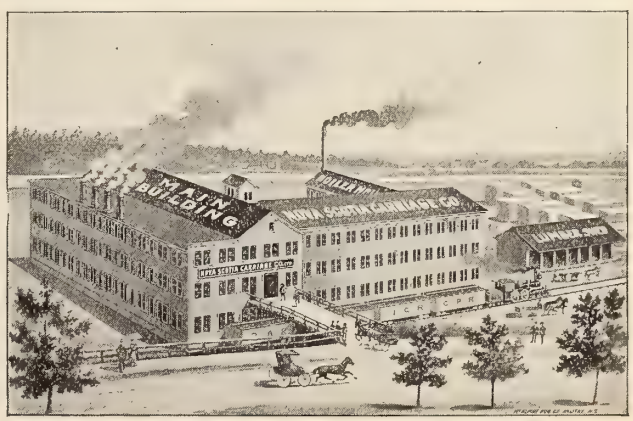
Fruit comes next. It is not long since Englishmen thought the only legitimate kind of apple that could be grown in Canada was the snow apple. In those days when the toboggan and the snowshoe were just about able to oust even the maple leaf as the emblem of Canada in the imagination of the Mother Country, it would have been considered a chapter in romance to predict that in twenty years the exportation of canned fruits alone would run into half a million dollars. Explorers were apt to find almost every belt in Canada but the fruit belt. When this was admitted into literature it was still fondly hoped by the sceptic that Canadian fruits were confined to southern Ontario and the St. Lawrence Valley. Even there it was scarcely hoped that the quality and quantity of the smaller fruits were such as to admit of any sort of consumption except the hand-to-mouth. But the farmer's wife with her sunbonnet picking wild raspberries for her fruit jars knew better. The Indians along Upper Lake Huron picking huckleberries by the ton knew better. The red woman far out on the western plains, 2,000 miles from Toronto and 700 miles north of Lake Ontario, picking wild raspberries, cranberries and strawberries by bushels for the white man in the towns, knew better.

And so has come about the canned-fruit era in Canada which has enabled the Canadian consumer in towns and cities to share the table luxuries of the farm. The fruits which we can both for home and foreign trade are apples, peaches, strawberries, raspberries, pears and plums. As to the individual size of some of these more might be said of some products from the United States. As to fibre and flavor the advantage is to the Canadian fruits. The northern sunlight puts a better tone into the apple and the raspberry. Canadian canned products in these varieties satisfy the most fastidious palate in the British market. And by the latest and most improved methods in canning the quality of the finished products is being brought steadily nearer to nature's standard.

In canned vegetables the bulk of the trade has not as yet been so conspicuous. But the canning factory for putting away peas, corn, tomatoes and beans is rapidly becoming a prominent feature in small towns. The day will surely come when the canned vegetable factory will flourish along the great Saskatchewan, whose gardens now produce the best vegetables in North America, but whose climate will not permit the growth of large fruits.

Pickles also are on the increase. It has long been the tradition at the Canadian dinner-table to read English labels on pickle bottles. That habit is fast becoming a memory. Canadians have learned to compete in the home market with the best makes of English pickles and sauces. A large retailer stated recently that half of his total sales in pickles were Canadian brands.

A comparatively recent feature of the canning situation has been the formation of the Canadian Canners, Limited. This syndicate now controls about 75 per cent. of the output, and has gone far towards regulating previous unsatisfactory conditions of supply and demand. With a protective tariff of 1½ c. a lb. on canned vegetables and 2¼ c. a lb. on fruit, the canned goods industry in Canada promises large things, especially in view of the North-West demand, which is three times as great per capita as that of Ontario.



Nova Scotia Carriage Co., Kentville, N.S.

BREWING AND DISTILLING.

Canada is the soberest country on record. Canadian sobriety, based on the ratio of consumption of spirituous liquors, has been increasing at nearly the same rate as population. This is peculiar. The peculiarity is all the more obvious from pondering these two facts:

Certain brands of Canadian whisky are famous in 33 countries.

Canada raised in the year 1903-04 a revenue of $7,955,385 from whisky.

The economics of the liquor trade are not simple. Canada has done considerable juggling with hers, especially since prohibition became a feature of politics. Any statistician curious to note how Canada has been behaving on the liquor question might get an accurate knowledge from the following tables:—

Per Capita Consumption of Liquors.

	Spirits. Gals.	Beer. Gals.	Wine. Gals.
1875	1.304	3.091	.149
1880	.715	2.248	.077
1885	1.126	2.639	.109
1890	.883	3.360	.104
1895	.666	3.471	.090
1900	.701	4.364	.085
1901	.765	4.737	.100
1902	.796	5.102	.090
1903	.870	4.712	.096
1904	.952	4.918	.096

Whisky drinking in three decades has decreased 31 per cent. But Canadian whisky a generation ago was as common and almost as cheap as Canadian lemonade is now. There was no excise and no duty. The article was in vogue by pailsful at barn-raisings, and by barrelsful at elections. Later the demijohn and the brown jug superseded the pail at logging-bees. Then came the era of the bottle. In the old days nearly all Canadian male people in the rural districts drank whisky. Now whisky drinking is an exception in the country districts, but has latterly developed in towns and cities.

On the other hand observe that beer consumption in Canada has increased in 30 years 56 per cent. This must be traced partly to the rapid development of the brewing industry, signified by the following:—

Ten Years of Brewing.

	1891.	1901.
Breweries	105	102
Employees	1,776	2,044
Capital	$8,316,812	$11,152,869
Wages	864,377	837,218
Output, value	5,718,685	6,475,400

Fluctuation in liquor consumption has sometimes been due to local option, Scott Act or temperance agitation. In this connection it is to be noted that the total vote polled in 1898 for prohibition was but 23 per cent. of the total electorate. The excise and the duty have contributed to regulate the traffic on the following basis:—

Ale, beer and porter imported in casks, 16c. per gal.; in bottles, 24c. per gal.

Malt, per pound, increased in 27 years from 1c. to 1½c. per pound.

Now for revenue on this basis:—

Total for Beer and All Liquors, Both Excise and Duty.

In 1869-70	$3,800,745.

Excise Alone.

	1900.	1901.	1902.	1903.	1904.
Spirits	$4,821,218	$5,180,775	$5,620,613	$6,162,827	$6,672,149
Malt	910,537	977,330	1,077809	1,020,623	1,137,556
Liquors	7,174	6,569	6,970	9,485	9,039
Malt	910,537	977,330	1,077,809	1,020,623	1,137,556

Observe from the foregoing tables that while since 1869 population has almost doubled, the consumption of malt liquors has been multiplied by four. The number of breweries has decreased by 18. The per capita consumption of spirits has decreased from 1.126 gals. in 1885 to .952 gals. in 1904.

On the other hand it must be noted that the consumption of spirits increased, in 1904, 22 per cent. over the average of the four years previous. This is attributed to immigration. A larger outpost population than ever before in the history of Canada means more whisky. The total production of spirits for 1904 was 5,678,153 gals.; for 1903, 4,063,603 gals.—an increase for one year of 39 per cent.

The total quantity of malt liquor produced in Canada in 1904 was 27,335,985 gals.; in 1903, 25,755,154 gals.; increase in one year, 1,580,381 gals., or about 6 per cent.

The magnitude of the industries responsible for this annual production of 53,111,139 gallons of liquor may be inferred from the following extract from the Canadian Almanac, 1897:—

"By adding together the amounts received from customs and excise duties, on spirits, wine, beer, cider, malt liquor, malt, tobacco, snuff, cigars and cigarettes during twenty-eight years, we have the sum of $212,157,000. The total amount expended by the Federal Government on the construction of railways, canals, public buildings, including the payments on account of the Canadian Pacific Railway, the North-West Territories and debts allowed to the provinces is $200,143,171. The duties collected from liquors and tobacco have, therefore, paid the cost of the Intercolonial and connecting railways, the contribution of the Federal Government in aid of the Canadian Pacific Railway, the purchase and subsequent cost of the North-West Territories, including Manitoba and the Public Buildings at Ottawa, all the canals including the Sault Ste. Marie and all the post offices, and all other public buildings erected all over the Dominion since Confederation.

Capital Invested.

(From the Report of the Royal Commissioners on Prohibition.)

	Capital.	Employees.	Wages.
Breweries	$ 8,311,453	1,724	774,411
Distilleries	7,054,000	451	384,802
Malt Houses	223,500		
Cider Mills	136,795	175	47,129
Wine Presses	396,475	150	37,955
Retail	59,000,000	30,000	10,500,000
	$75,122,223	32,500	$11,744,297

Considering the new buildings erected and the improvements which have been made since these figures were compiled, an increase of 10 per cent. could reasonably be made. While the above embraces the whole of Canada, Ontario would represent about two-thirds."

The following figures will indicate the complicated way in which brewing and distilling are related to other interests: —

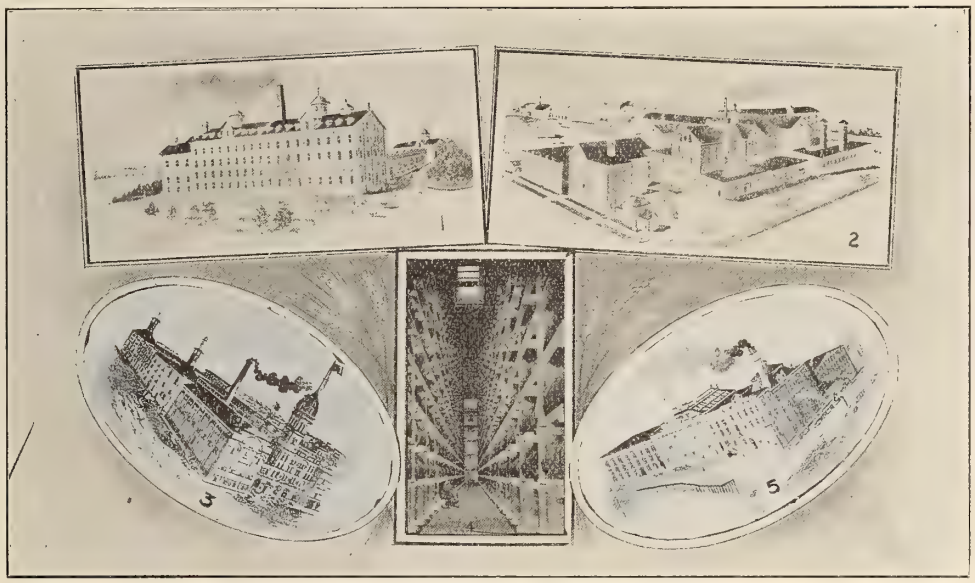
Incidental Economics of the Trade (1892).

Value of horses	$ 50,108
Value of harness	17,678
Value of wagons	58,969
Hay and oats consumed	59,966

Freight paid	211,805
Casks	617,206
Bottles	121,228
Fuel	110,778
Wages	774,411
Cattle fed, number	10,000
Cattle feeders, number	87
Wages of cattle feeders	$24,150
Hay consumed, tons	12,500
Hay, value of	$135,500
Cost of Cattle	400,000
Selling price of cattle	800,000
Freights to England	157,000

One thing may be clearly inferred—that the Canadian brewer and distiller has made a minute study of the economics of this problem in its relation to cattle-feeding and the export trade in beef. This may help to explain the paradox that Canada's consumption of malt liquors is comparatively low, and of spirits the lowest on record, while her brewers and distillers in the face of large imports are in a flourishing condition. It will be noticed that the combined value of invested property in the liquor trade, manufacturing, wholesale and retail, is estimated at more than $75,000,000.

The close relation of the industry to the agricultural interests of Canada is another of its economic features. This is more native to Ontario than to any other province. The brewing industry and several of the largest distilleries are confined to Ontario. The barley of that Province is of a high grade. In good years, when rainfall is not too heavy, Ontario prime barley going direct to the brewer has been an important factor in the farmers' revenue. In wet years, when the grain is discolored, a large percentage of it goes to the hogs and cattle. In several counties of Ontario also, corn is a standard crop. Hops are largely imported. Wheat is home-grown.



Some Brews that are Making Canada Famous.

1. The Carling Brewing & Malting Co., Ltd., London.
2. John Labatt, London.
3. The O'Keefe Brewing Co., Ltd., Toronto.
4. Hiram Walker & Sons' Rack Warehouse, containing 20,000 Barrels.
5. Reinhardt & Co., Toronto.

As to Quality.

Unlimited malting material, clean methods, wholesome breweries, and the utmost precautions in putting up goods for sale have won the Canadian brewer practical and enviable recognition for quality. While it is not pretended that Canada is able to produce as yet in as large quantities quite such high-class beers as come to Canada from Milwaukee and Cincinnati, it is to be noted with pride that Canadian beer began to become famous abroad as far back as 1877. In that year Canadian brewers took medals at Sydney, Australia. In 1891 they received similar awards in Paris, also at the World's Fair in Chicago and at San Francisco in 1894.

The proportion of manufactured to imported spirits in 1903 was 1.9 to 1. The proportion of manufactured malt liquors to imported malt liquors in 1903 was 45 to 1. This ratio is not expected to diminish if one may judge from a comparative glance at export figures, showing how Canadian-made liquors are competing with the world's best brews and distillings in the world's markets.

Kinds of Liquors.	Exports for 1897. Quant.	Value.	Exports for 1902. Quant.	Value.
	Gals.	$	Gals.	$
Ale and beer	16,294	8,222	11,881	11,310
Brandy	1,789	4,098	3,165	8,996
Gin	12,562	4,742	9,057	11,498
Rum	35,358	4,954	7,297	2,288
Whisky	155,902	444,756	163,833	462,217
Wines	5,181	8,733	13,454	44,429
Other spirits, n.e.s	3,476	8,687	37,219	31,053
	230,562	484,192	245,906	571,791

For the year ending June 30th, 1904, exports of Canadian whisky were 180,291 gallons, valued at $540,000.

Our best customer is the United States, which takes ten-elevenths of our exports of beer and ale, most of our gin and a large percentage of our brandy and whisky.

Canadian whisky has won an enviable reputation abroad. Thirty-three countries or practically the whole world, where civilized liquors are drunk, know the taste of Canadian whisky. There are people in the United States who drink no other; connoisseurs in England who prefer Canadian brands to Irish or Scotch. There are dealers in some American cities who, unwilling to cater to a growing demand for some noted Canadian brands, fill empty bottles with inferior whisky. The customer who asks for his favorite Canadian brand begins to find out that something has gone wrong with it. When he discovers the trick he can only decide that though imitation may be the sincerest form of flattery, there are a few things it is quite impossible to imitate.

Canadian distillers, as well as brewers, are looking forward to a larger exportation in years to come. As to an expanding home market, they are practically certain. This has been partly prefigured in the enormous increases in the consumption of malt liquors and in the still more recent increase in spirits. That the latter is due to a larger percentage of foreign population brought about by the crowding in of new settlers seems probable enough when it is remembered that with a large population on the outposts whisky represents a heavy saving over beer in the cost of freight, alcohol being cheaper to ship than water according to value. This element of Canadian population is growing so rapidly that the large increase of last year may be expected to recur as a characteristic feature.

TOBACCO AND CIGARS.

Canada is yet largely the land of the pipe. This is as much true of Canada as the fact that the cigar is the characteristic of the United States. But the cigar is creeping up on the Canadian pipe, which is a partial way of stating that the consumption of tobacco in Canada is enormously increasing.

The increase is due to a variety of causes,—massing of population in towns and cities, increase of spending money, evolution in tobacco manufactures rendering the habit more attractive, the growth of the busy life and the sedentary life. In the pioneer days the tobacco habit in Canada cost the country at large less than the price of its toothpicks to-day. Chewing was the general habit in the woods and on the farm. Tobacco was both coarse and cheap. Tastes were not fastidious. The average tobacco-user knew but two kinds of the weed, chewing and smoking. Sometimes these were convertible. And in former days when a large proportion of the inhabitants lived remote either from a town, a village, or a tobacco store, the average smoker enjoyed but a couple of pipes a day. Now the habit has become general. On a leading thoroughfare of Toronto tobacco shops are more common than eating-houses. The old plug tobacco, by no means obsolete, has developed into fine-cut, of which the average smoker, whose father may have used nothing but "Canada green," has a repertoire of more than twenty kinds, with a few leading favorites. The cigar habit has become common. The cigarette has come. This also is a sign of a large urban population, since but few cigarettes are smoked in the rural districts.

The recent growth of the tobacco industry in Canada is indicated by the following statistics:—

A Decade of Tobacco Manufacturing.

	No. of Establishments.	Capital	Employees.	Wages.	Value of Output.
1891	31	$2,130,000	2,091	$481,252	$2,347,651
1901	22	4,747,030	2,186	565,270	6,469,961

Ten Years of Cigars and Cigarettes.

	Concerns.	Capital	Employees.	Wages.	Value of Products.
1891....	93	$1,653,238	3,165	$ 953,960	$3,280,114
1901....	138	2,500,510	4,143	1,366,146	5,332,151

These figures indicate generally an increase in the number of manufacturing concerns of 30 per cent., in capital of over 90 per cent., in number of employees about 20 per cent., in wages of about 40 per cent., and in value of output of practically 100 per cent.

Allowing for a normal increase since 1901, the annual production of tobaccos, cigars, and cigarettes in Canada is now not less than $15,000,000.

Here are some comparative figures:—

Tobacco, Snuff and Cigarettes.

	Manufactured (lbs.)	Consumption (lbs.)	Raw Leaf Used (lbs.)	Duty.
1904	13,488,306	13,160,660	12,139,700	$4,127,679
Average.				
1900-1903	12,128,953	11,906,768	10,380,566	$3,521,920

Cigars.

1904	183,048,907	180,485,202	$1,070,823
Average.			
1900-1903	152,375,739	149,802,383	$889,733

Canada is as much interested in making tobacco as in turning out shoes. She spends as much on manufacturing tobacco smoke as on making cotton. The annual output of her cigar and tobacco factories is on a par with her output of machinery and iron manufactures.

The arithmetic of this is outlined by the following table:

Annual Consumption per Head.

1874	2.566 lbs.	1901	2.404 lbs.
1884	2.476 "	1902	2.404 "
1894	2.264 "	1903	2.548 "
1900	2.300 "	1904	2.765 "

The tobacco habit in 1904 cost every man, woman, and child in Canada $1.04 in taxation. In 1903 the inland revenue per capita was 99 cents; in 1902 it was 95 cents. At the same average rate of increase, and a population increasing at the rate of the past two years, the annual amount of tobacco consumed in Canada in 1915 will be 30,000,000 lbs.

Five only of Canada's premier industries rank ahead of the manufacture of Tobacco. These are the Bacon Hog, the Prime Steer, the Dairy Cow, the Flour Mill and the Saw Mill. Canada sent up in smoke in 1903 15,521,002 lbs. of tobacco. Loaded in box cars, at 30,000 lbs. to the car, Canada's 1904 smoke bill would have made a train 13½ miles long.

This is merely on a basis of consumption. Imports, however, must be considered. Canada is still a tobacco importer. Last year the total amount on which she paid duty was $3,006,659. In 1899 the amount imported was $2,028,331. The imports for 1904 were distributed as follows:

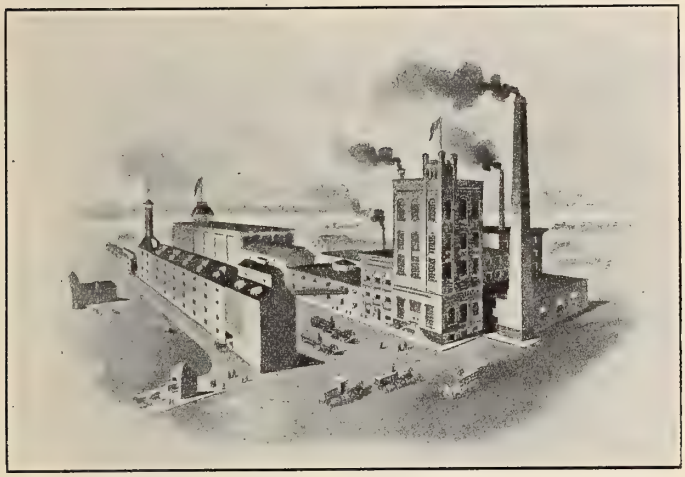
Cigarettes	$ 55,068
Cigars	340,456
Cut Tobacco	146,943
Snuff	4,903
Foreign Raw Leaf	$ 6,591
All others	70,022
Tobacco Accessories, Pipes, etc.	444,747
Total Importations	$768,730

Imports of all tobacco into Canada have increased from $2,028,331 in 1899, to $3,006,659 in 1904.

But as imports have increased so also have exports. At Confederation the total outgo of tobacco from Canada was $32,340—about the price to-day of three good farms in Ontario. Last year Canada exported tobaccos and cigars to the value of $644,605. By 1899 the total exports of Canadian tobaccos had amounted to $177,167. Note that the increase in 31 years was but $134,827, while the increase during the last six years has been $467,438. What has made the difference in the pace? The fact that Canada has during the past decade been re-discovering a fact which in a kindergarten sort of way she knew fifty years ago, that she is able to compete in growing the very best leaf tobacco with Kentucky and Tennessee.

"Canada green," variously dubbed by the cynic in time past as "Canada whack" and "Canada hump," has suddenly become a factor in production on a large scale. In three districts of Canada has this product of late become conspicuous: Southern Quebec, Essex County in Ontario, and the Okanagan Valley, B.C.

The Quebec crop is less of a surprise, as for years the French habitant has been making his own twist for home smoking, and factories have existed in that province for some time for the mingling of native leaf with imported in the manufacture of plug and fine-cut. The Essex area, however, has become something of a revelation to those who thought there was no part of Canada not liable to snow any month in the year. As a geographical matter of fact the tobacco area in Essex, including Pelee Island, lies as far south as Cincinnati, Ohio, and is a peninsula visited by warm moist winds, and exempt from frost for seven months in the year. The soil, too, is a sandy loam. Farmers who before 1898 eked out a scanty living with hogs at low prices, have begun to pay off mortgages with tobacco. The first experiments were in many cases dismal failures. The farmers knew not how to cultivate or to harvest, still less how to cure the leaf. They had no tobacco barns. In 1903, however, the farmers of that peninsula raised 3,500,000 pounds of White Burley. This leaf is peculiarly adapted for smoking mixtures. It is pronounced by experts to be equal in quality to the best American leaf. Better methods of curing have come into vogue. The tobacco barn has gone up, whereas in the early days the

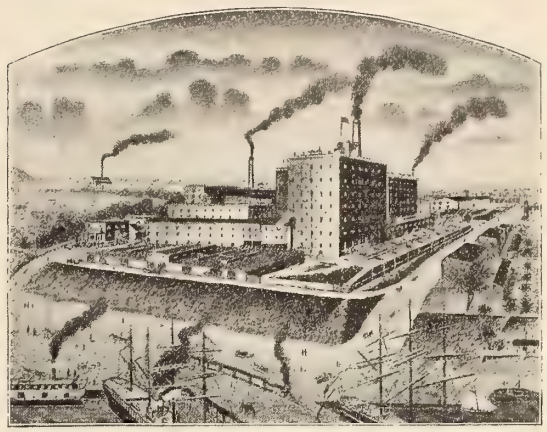


DREWRY'S "REDWOOD" BREWERY, WINNIPEG.

farmer hung his tobacco up in his hay mow. Wastage has decreased. Farmers have yet much to learn about the curing of this valuable leaf, however much they may know about its culture. With better methods of curing it is predicted by tobacconists that in five years not a pound of United States tobacco will be imported into Canada. It has been shown, too, by the manufacturer of cigars from native leaf, that the Essex peninsula is able to grow a first-class leaf for that branch of the trade.

In exploiting Canadian tobacco the Empire Tobacco Company has been a pioneer. This company still buys the bulk of the Canadian leaf, and from the various blends of this product with foreign leaf they have built up an enormous business. The recent operations of the American Tobacco Company, which practically absorbed the Empire Tobacco Company and introduced wholesalers to the principle of the "exclusive contract," has given the Canadian trade a sample of the methods of a huge trust. An Act passed by the Canadian Parliament last session, however, gave the Minister of Inland Revenue power to cancel the licenses of the American and Empire Tobacco companies should they perpetuate the "consignment agreement."

With proper regulation of the trust feature and consequent fair play to the smaller manufacturer, the tobacco trade of Canada is undoubtedly scheduled for a remarkable expansion. In a few years the annual production of cigars will be on a par with that of tobaccos. Canada already turns out a score of makes in cigars which challenge comparison in both 5 and 10 cent lines



THE ST. LAWRENCE SUGAR REFINING CO., LTD., MONTREAL.

with the best made anywhere. Users of these makes know their distinctive flavor as well as a connoisseur knows the taste of Canadian whisky. New makes of cigars are coming into the market every little while. In selection of leaf, in filling and in wrapping, these cigars are as well built and as palatable as their most formidable competitors in the United States. As an instance of how rapidly a new cigar may get into the market in wholesale quantities and obtain a popular vogue, may be cited the case of a well-known factory in Quebec which started in 1900 with ten hands and now has on its pay-roll 125 hands, turning out more than 300,000 cigars a month. Such cigars as these are rapidly becoming as proverbial in Canada as her bacon hog, her prime steer, and her wheat-fields. The extraordinary influx of settlers from the United States into the West which marks this decade is bound to enormously extend the domestic market for cigars. At the same time the scarcely less enormous immigration of Britishers, ninety per cent. of whom bring their pipes with them, is sure to emphasize the local demand for Canadian manufactured tobaccos. Between the pipe and the cigar, whatever may be said of the cigarette, Canadian tobacco smoke seems destined to remain a large factor in Canadian trade and industry.



W. J. GAGE & CO., LTD., TORONTO.

WOOLLENS.

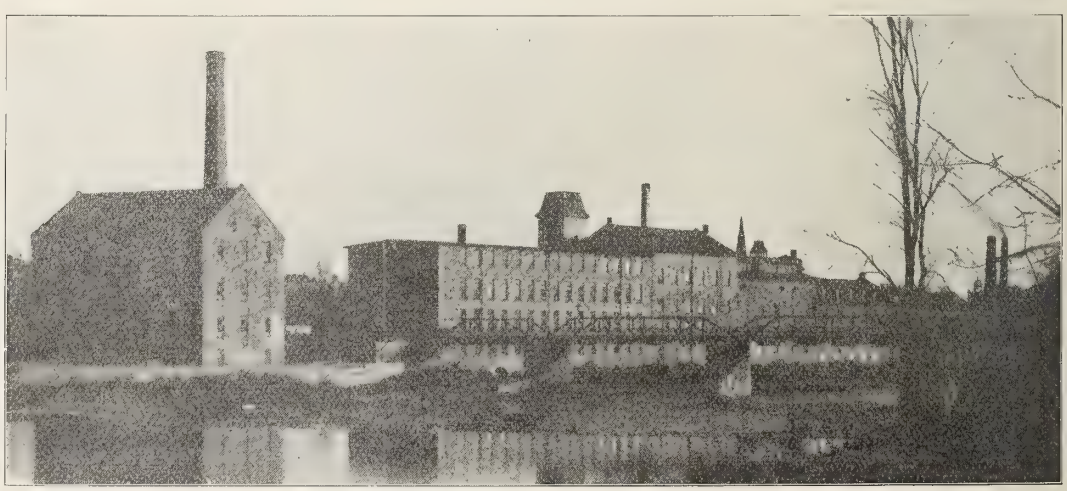
"Wild and woolly" has been the taunting epithet applied to a considerable part of Canada in time past. The paradox is that the more civilized Canada became, the "woollier" she became. Canada is the only country in the world where blankets and tweeds are manufactured on a site that one generation ago was a grazing ground for buffalo. From the woollen mills of Edmonton, N.W.T., exhibits were shown at the National Exhibition in Toronto last year. Canada is the only country in the British Empire where, in the same town, men, who in their youth wore no clothing but "full-cloth," manufactured from the back of the sheep to the back of the owner of the sheep by the owner's wife, may be found living side by side with men who own and operate woollen mills employing hundreds of skilled workers, equipped with power-driven spindles by the hundred, looms by the score, and sending their products not merely over a settlement in the backwoods, but from Halifax to Vancouver.

Several factors have contributed to making Canada the land of the woollen mill. Three of the most notable are a cold winter climate, an abundance of water power, and the fact that the raising of sheep has usually been considered both easy and profitable. It would have been infinitely more poetic to have kept the old spinning wheel and the hand loom and the carpet loom worked with a treadle. But the poetry had to go to the attic and the shed, when along scores of rivers in the eastern and middle provinces there rose the chimney of the woollen mill side by side with the smokestack of the sawmill and the grist-mill. Perhaps in no other branch of Canadian industrial development has progress been better pictured than in the making of cloth and the fabrics of the loom. The ancient "full-cloth" manufactured by "ma" in the farmhouse kitchen into coat and trousers for "pa" and the boys was an honest old weave. There was only one piece in the season's output, and it was all of the same dye and the same pattern. Father and son dressed themselves from that web, and the neighbor's clothes were not very much different. Now, it is quite possible for every citizen of the little town or village inhabited by the descendants of the old hand-loomers to wear a different article of clothing, with a distinctive weave, made from the products of Canadian looms.

The evolution of cloth has been rapid, more so than the fabric of society. Growing wealth and developing taste, and the necessity of competing with foreign looms as to texture and pattern, contributed to this. The woollen industry became conspicuous in trade rather early in our history, beginning with the manufacture of the world-famous Halifax tweed. It would have been easy for Canada to have imported her clothes along with her traditions from the Mother Country. But long ago, in the face of competition, Canada had begun to make a very creditable share of her own clothes. In 1851 New Brunswick had 52 carding and weaving mills, Upper and Lower Canada (Ontario and Quebec) had 385 carding and fulling mills, and 250 weaving concerns. And there were yet in New Brunswick 5,475 hand-looms, and in Nova Scotia 11,096. Fifty years ago the annual output of all the looms of Canada was 6,516,391 yards of flannel and cloth. Twenty years later the product rose to 8,500,000 yards. In that year—1871—Canada possessed 270 cloth mills, 650 carding and fulling mills and hosiery factories, and 35 dyeing and scouring concerns. The total output for that year was $5,507,549; hands employed, 4,453; wages paid, $917,827. In this, note the first appearance of what is to-day one of our leading specialties in wool manufactures—knitted goods. Two more decades—1891—showed 377 woollen mills, 7,156 hands, $1,884,400 wages, and a total output of $8,087,871. Ten years more and the census shows a decrease in the number of mills to 221 all told; hands, 10,803; wages, $3,160,387; total output, $11,424,927. That ten years of history in wool shows that smaller industries became merged in larger, that the number of hands increased by 30 per cent., wages by 90 per cent., and output by 40 per cent.

The last twenty years of wool history in Canada discloses emphatic and most creditable progress in the manufacture of cloth, not only in the medium varieties made from native wool,

Canada has 300 woollen mills.
The value of these mills is $16,000,000.
In these 300 mills work 13,000 people.
These 13,000 wool-workers support 50,000 other people.
One in every 100 of Canada's population is supported solely by wool.
One woollen mill in a town of 4,000 employs 800 hands.
The total value of all woollen manufactures in Canada in 1901 was $11,424,927.
The total value of woollens imported into Canada in 1902 was $10,949,909.



The C. Turnbull Co., Ltd., Galt.

but also in the finer grades made from imported fleece. In shoddy, Canadian mills might have been able to supply the demand but for the foreign exporter, who persisted in sending shoddy into Canada. Still, it is gratifying to record the fact



Rosamond Woollen Co., Almonte.

that the itinerant vendor of the cheap weaves put up by shoddy mills is going out of business, with the education of the farmer and the laboring man. In the very finest grades of woollen cloths Canada has never been able to drive out the product of foreign looms. With the wholesale importation of fine, foreign fleeces, our manufacturers advanced notably along the lines of finer weaves; so markedly, indeed, that to-day experienced merchants cannot distinguish between Canadian and English makes. The obstacles were for a time scarcity of skilled operatives in this country, the higher rate of wages paid, the greater cost of machinery and plant, and the fewer facilities for producing the trade's growing demand for continual change of patterns. Many of these difficulties have since been overcome. The Canadian maker of cloth has put himself in close touch with the Canadian wearer of cloth, yielding only to the British manufacturer in the very finest makes to please fastidious people, and people who never wear anything but the very finest of tailor-mades.

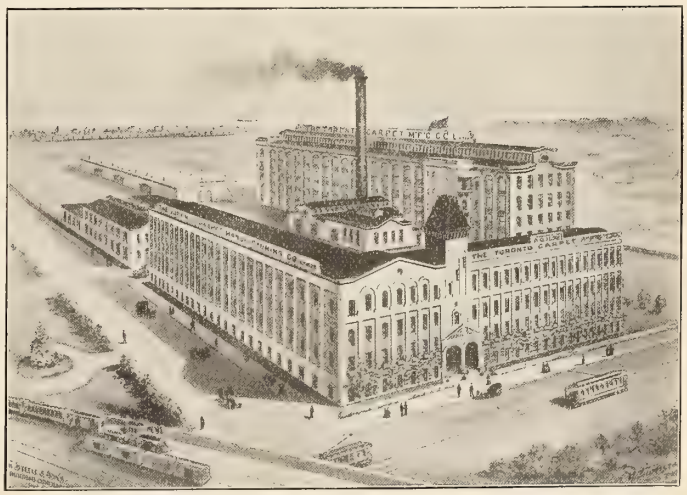
Aside from distinctive cloth manufactures, Canada has achieved distinctive things in less showy but quite as substantial lines. Here may be noted with emphasis and pardonable pride our pre-eminence in the manufacture of knitted goods, hosiery, and underwear. The writer has in mind now one little brown mill on the banks of a brawling little brook in a town of less than 2,000 people. This inconspicuous little brown mill converts imported wool into knitted underwear and hosiery. It does little else, but this specialty, with the trade-mark of superiority and honesty written in every stitch of yarn, travels clear over this broad Dominion from Cape Breton to Vancouver Island. And there are scores of men living in that town whose wives once knit by hand all the socks and stockings, as well as the mittens, for the household.

Flannels and flannelettes also have become a peculiar Canadian product, challenging competition the world over. The trade this season is 75 per cent. of Canadian makes, and the quality is constantly improving. In plain colors and Saxony flannelettes, the Canadians are equal to the best imported, and in grey and navy they hold the field. In scarlets, however, 75 per cent. are imported, and in fancy flannels at least 85 per cent.

Carpet-making has entered the list as one of the strongest factors in production. Canada has for more than one generation been famous for its carpets, but the pioneer articles were made of rags, usually by the farmer's wife, who took the best part of two years to save up and borrow enough rags, and the best part of another year to make the carpet. The next stage in development was for the farmer's wife to take her rags to a carpet-maker in town. The final stage was the factory, where rag-carpets are out of vogue, but where wool and union carpets are made along with rugs and tapestries. There are in Canada several prosperous firms who make a specialty of carpets and tapestries, and the number is steadily increasing. Native wool has become an integral factor in this industry, its coarse fibre being peculiarly adapted to the texture of most durable, as well as most artistic carpets.

The best native wool comes from Halifax; but wool-growing cannot be said to be forging ahead in middle Canada. In both Quebec and Ontario the number of sheep has remained practically stationary for the past ten years. Prices of wool ran low, and the clip became unprofitable. Many farmers went out of sheep altogether. With better prices for wool, many farmers have been returning to sheep-raising. The return, however, has been slow. Once out of the notion and the habit of raising sheep, the Canadian farmer is reluctant to go back to it. The sheep requires a special sort of care, and the Canadian farmer has been too busy of late years looking after the Canadian bacon hog and the prime steer to convince himself that he can make proportionately as much money from the sheep. It is to be noted with satisfaction, however, that the average clip per sheep has increased since 1892 in Ontario from 5.81 lbs. to 6.21 lbs., and in Quebec from 3.5 lbs. to 4.2 lbs. In the North-West the story is different. There large ranches are devoted to nothing but sheep-raising. The old buffalo lands of Alberta have no superior as sheep pastures. Sheep are able to range out there all winter in the light snow. About 200,000 head of sheep are now in sight in Western Canada.

One serious drawback to the woollen manufacturing industry in Canada is lack of sufficient tariff protection. Under the British preference introduced by Sir Wilfrid Laurier, the former duty of 35 per cent. was reduced to 23⅓ per cent. This created havoc in the woollen trade. Prices fell below the point where a profit was possible to Canadian manufacturers, and the market was



Toronto Carpet Mfg. Co., Ltd., Toronto.

further demoralized by the importation and sale of large quantities of shoddy in competition with the better qualities of Canadian cloth. As the result, a number of mills were forced to close down, and ruin threatened the whole industry. Then, after a prolonged and strenuous agitation, in which the Canadian Manufacturers' Association bore a prominent part, the Government yielded partially to the appeal of the woollen manufacturers and raised the duty on certain lines to 30 per cent. This action, though alleviating the trouble, has not removed it, and the manufacturers are now requesting the restoration of the original rate of 35 per cent. Such protection is required, they say, in view of the higher cost of production in Canada as compared with Great Britain, from which their chief competition comes.

COTTONS.

It is scarcely colonial presumption to remark that the cotton industry of the youngest cotton manufacturing country in the world compares favorably with that of the oldest and the greatest—England. It is almost four centuries since the population of Great Britain was no larger than that of Canada is now. In 1528 the total exports and imports of Great Britain were less than the value of one year's output from the cotton mills of Canada. Perhaps the comparison is a trifle romantic, but it is scarcely more so than the development of the cotton industry in Canada. Canadian cotton is the story of but fifty years, summed up in the following:—

Canada contains 26 cotton mills.

Canada employs nearly 14,000 hands in the manufacture of cotton.

In nineteen years—1885-03—Canadian imports of cotton wool increased from $2,852,987 to $5,968,333.

The average value of a Canadian cotton plant is $1,000,000 with an average number of about 500 hands.

A COMPARISON IN COTTON.

	ENGLAND.	CANADA.	RATIO.
Annual Production	$450,000,000	$15,000,000	30 to 1
Home Consumption	125,000,000	25,000,000	5 to 1
Investment	500,000,000	25,000,000	20 to 1
Wages	200,000,000	4,000,000	50 to 1
Raw Material	175,000,000	5,500,000	31 to 1
Population	42,000,000	6,000,000	7 to 1

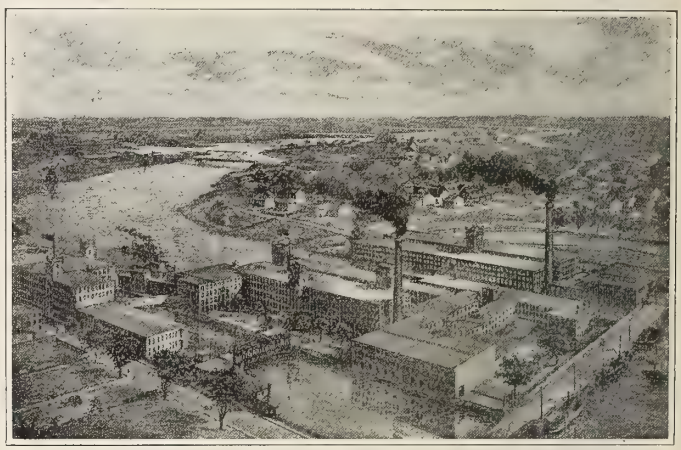
Canadian cotton is responsible for the following figures:—

Canadian Cotton Calculations.

Value of property	$23,860,622
Yearly production	14,970,000
Hands employed	13,429
Yearly wages	$3,916,626
Yearly coal consumption	736,400
Yearly supplies outlay	1,583,351
Yearly railway freight	676,500
Yearly duties on machinery	159,950
Yearly plant improvements	875,500
Yearly raw cotton importations	5,579,031
Yearly increase in imports of all raw material	4,028,675

From the above it will be noted that Canada has made a few advances along cotton lines since the good old days of long ago when the farmer on the back concession had a suit of brown duck for week-days and a new smock of grey denim to go to mill in; when his wife had a Sunday wincey dress and considered factory cotton a luxury.

Canada is not a heavy exporter of cotton; in many respects does not hope to be. The home market is extending so rapidly that manufacturers would be well content to have a monopoly of that. Is this adequate? Let us see by way of comparison as to actual consumption. With a population of 42,000,000 Great Britain consumes annually $125,000,000 of cotton; with a population of 6,000,000 Canada consumes $25,000,000, a ratio of 5 to 1 on a basis of ratio in population of 7 to 1. This in spite of the fact that Canada on account of its climate is a wool-wearing country. Obviously then the normal consumption of cotton in Canada is much larger per capita than in Great Britain. What is the reason? Largely in the fact that our population is more and more an out-of-doors contingent, men who work in the forest, in mines,



MONTREAL COTTON CO., VALLEYFIELD.

on railroads, and on the land. Somewhat also because a heavy and constantly expanding feature of trade is in grain and the products of the mill, which require an annual vast consumption of sacks and bags.

The evolution of the Canadian spindle has been rapid and constant. Dating from two years before Confederation, 1865, the following are the facts:—

	Mills.	Spindles.
In 1865	5	40,000
In 1871	8	95,000
In 1881	..	243,000
In 1885	25	461,748
In 1896	22	643,312

In 1886 Canada had produced so much manufactured cotton that it became necessary to export to China. The home market which since that time has grown to such phenomenal proportions was not sufficient. In 1887 more than 5,500,000 yards of grey cotton went to China over the C.P.R. In 1894 China took 12,500,000 yards. At the Boxer rising the exports to China dwindled. They have since revived and are constantly increasing.

But the Canadian cotton industry has not been confined to coarser fabrics. The value of this industry to Canada consists in the large margin between the cost of the raw material and the price of the fabric. The quantum of labor has been much larger than a mere census of laborers would indicate. Here for instance:—



HUDSON BAY KNITTING CO., MONTREAL.

Table of Production Values.

	In Raw Cotton. per lb.	In Fin. per yd.	Fabric, per lb.
Ten ounce duck	6c.	8¾c.	.14
Three yard drill	6c.	5¼c.	.16
Four yard sheeting	6c.	4½c.	.18
Satin stripe tick	6c.	12c.	.24
Six ounce denim	6c.	12c.	.30
Shade cloth	6c.	5c.	.34
Madras	6c.	7c.	.40
Amisilk	6c.	35c.	$1.00
Poplin	6c.	68c.	1.80
Fancy ginghams	6c.	45c.	3.00
Persian lawn	6c.	25c.	4.00
Embroidery	6c.	30c.	20.00



THE GALT KNITTING CO., LTD., GALT.

In what do the cotton spindles and looms of Canada excel? In ducks, denims, cottonades, drills, cotton quilts, white and grey cotton, prints, dyed goods, linings, heavy black sateens, cotton-filled and eiderdown comforters. In these various and increasing popular lines Canadian manufacturers fear no competitors the world over. Fine lawns, nainsook, and the high grades of sateen are imported. These, however, form but a small percentage of Canadian annual consumption of cotton fabrics. The heaviest output is in the working lines, where strength and durability are the main essentials. Second in importance are the more finished fabrics, prints, ginghams, linings, etc., where a certain degree of style is necessary.

In order to keep abreast of modern improvement Canadian manufacturers spend annually nearly a million dollars, or a charge on invested capital of 3¾ per cent., for plant improvement. This is much more than the ordinary wear and tear, and a large percentage of it must be charged to actual development. This has been rendered necessary by the constant evolution in quality dependent on style. So far as ordinary brown and grey duck and common factory cottons are concerned, Canadian mills have nothing to learn.

Among the precarious fabrics of fashion there has been much to learn, and it speaks volumes for the enterprise and ambition of the Canadian manufacturer that he has been willing to charge his business so highly with the cost of appliances and skilled labor to compete with foreign makes.

The improvement has been manifold. Colored cottons and prints have been largely affected by it. The world has no better ginghams and zephyrs than those from Canadian mills. Fancy dress fabrics stand well up in the lead. Canadian flannelettes and cottonades are the equal of any made in England. Canadian linings are famous. In this department the changes have been notable, amounting in a few years to an evolution. Silesias, kid cambrics, etc., have been evolved by the dictates of style into satinettes, percalines, nearsiks, surahs, lustrals and spun glass taffetas.

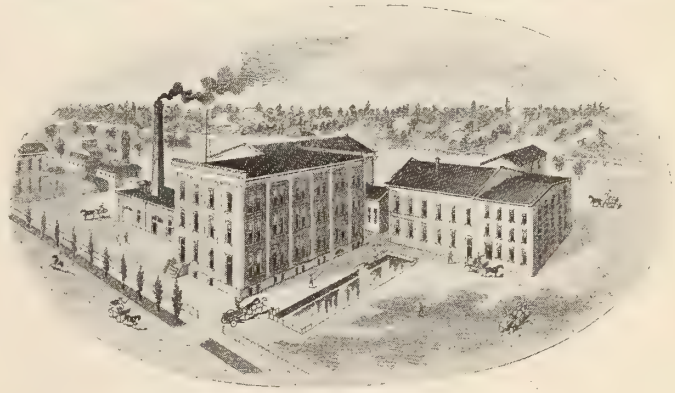
The Canadian manufacturer might have permitted the Canadian wholesaler to import these highly civilized fabrics from England altogether. But the Canadian cotton manufacturer had his eye on the home market which he had won against heavy odds, and he cheerfully paid out the cash to make the needed improvements in his plant. All this meant a constantly increasing investment in labor and a consequent increase in the value of this industry to the country at large.

An Up-Hill Fight.

The Canadian manufacturer responsible for the development of this important industry has never been on "Easy Street." Perhaps in no line of industrial advancement has he shown more determined, almost dogged ambition. There were obstacles, many and of large size. Canada from her geographical location and her Imperial connections has sometimes in the course of her history found herself beween the devil and the deep sea. The United States has been on one side; on the other England. Competition has come from both. On one side the greatest producer of raw cotton in the world; on the other the greatest manufacturer of cotton fabrics in the world. The United States with its raw material right at home enjoys high protection. Cotton mills have sprung up like mushroons in the United States. Their over-production has dumped its job lots on Canada over a wall only 25 to 35 per cent. in height. Under the preferential tariff the Canadian manufacturer enjoyed the mild protection of 16⅔ per cent. on white and grey, and 23⅓ per cent. on printed, dyed and colored cottons. In the face of this conspiracy of tariffs the Canadian manufacturer of cotton has persisted with as much patriotism under his own cotton shirt as possible. Against these tariffs he is still laboring and making headway, striving to believe in the Imperial motto, "What we have we hold."

Other obstacles, too, he had and still has. The cost of machinery is higher in Canada than in either Great Britain or the United States. Wages are a third higher in Canada than in Manchester. Coal costs more in Canada than in Lancashire. Money in Canada costs two per cent. more than in Eugland. And in addition to all these Canadian mills have not been able to specialize so rapidly as their rivals in the United States and Great Britain. Consequently they have been handicapped in turning out the finer lines of goods.

If in the face of all this the Canadian cotton manufacturer has still been able to hold the bulk of his home market and to keep along the highway of evolution, what better argument is needed to prove that the cotton industry of Canada ranks among the best and most permanent investments of the country, if not of the whole Empire? Many of these obstacles will take generations to remove. But there is one which is not so much based on rigid economics. It is the tariff.



THE PARIS WINCEY MILLS CO., PARIS.

WEARING APPAREL.

The sewing-machine, the scissors and the knitting machine are responsible for putting on the Canadian market each year goods worth not less than $37,000,000. They are the motive power of no less than ten co-related industries devoted to making things for Canadians to wear. This, of course, does not include either woollen mills, carpet mills or cotton mills; but simply those industries which take woven goods as raw material. The main exception is the knitting industry, which has been noted as a feature of the woollen trade, but ultimately belongs to that of ready-to-wear clothing.

The products of the wearing apparel group of industries may be roughly divided into men's and boys' ready-to-wear suits, women's dresses, cloaks and mantles, corsets, underwear, white wear, hosiery, collars, handkerchiefs, ties and general men's furnishings, buttons and thread, gloves and mitts, hats, caps and furs. Thus it will be seen that Canadians have learned to make at home practically everything that a civilized community needs to wear; and this group of co-related industries with its invested capital of not less than $29,000,000 is but the modern differentiated and industrial replica of the pioneer era when the things that Canadians wore were so crude and primitive that any ordinary housewife, with a few hours a week of spare time and an old-fashioned sewing machine was able to make most of them.

The writer well remembers the first pair of trousers he ever had made to order. They were done by a farmer on wet days. The material was outrageous and the fit was worse; but the latter was a good deal better than the wearer could have done for himself, and perhaps as good as would have been the work of any of the women in the neighborhood. And in those days, when muskrats were plentiful in the marshes, the women made caps for the boys; and the print shirts and the brown duck overalls and the smocks, as well as the socks and the mitts and some of the linen collars were made by hand, home-made and old-fashioned, but suggesting in a primitive form what in the latter part of the nineteenth century should develop into one of Canada's leading industries.

The 1901 census figures for the clothing industries in Canada are suggestive and interesting.

	No. of Est.	Capital.	Hands.	Wages.	Value of Output.
Tailoring & Cloth-ing.	793	$9,263,943	20,983	$4,467,806	$17,755,730
Men's Furnish-ings.	52	2,821,302	4,976	1,071,146	4,623,652
Furriers and Hat-ters.	115	4,136,236	5,273	881,960	5,876,467
Gloves and Mitts..	22	778,003	974	209,608	1,024,245
Hosiery and Un-derwear.	52	3,723,197	5,687	889,882	3,857,519
Dressmaking and Millinery.	360	3,543,599	8,007	1,670,479	6,659,207
Corset Making. . . .	21	410,501	646	147,445	592,341
Button Making. . . .	5	258,137	319	63,582	150,000
Oiled Cloth and Clothing.	6	639,990	270	82,070	560,693
Total not includ-ing sundries. . . .	1,426	$25,594,908	43,135	$9,483,978	$41,079,854

Tailoring and clothing combined, it will be noticed, represent an invested capital of $9,263,943, an annual output of $17,755,730, wages $4,467,806. About 60 per cent. of the capital invested and about 51 per cent. of the output belong to the custom tailor. In all probability were a census to be taken at present, the proportions would be found rather more than reversed, for the evolution of the factory-made suit has been decisively marked since 1901. Since its inception, the development of men's wholesale suit-making in Canada has been enormous. Popularly known as the "hand-me-down," the ready-made suit became a conspicuous item in American economics at the time of the Civil War and afterwards. The industry received its first great impetus during the war in the making of uniforms. After the war, when thousands of civilian soldiers returned to civil life, new suits were required in wholesale quantities. Quality was not so much considered; fit was unimportant. The fashion spread to Canada and the goods likewise. The country stores were liberally supplied with ready-made clothing, much of which came from the factories of the United States. Country tailors were few and far between. Roads were bad. Money was scarce. Tastes were simple. Style was not considered. This gave a big impetus to the ready-to-wear industry in Canada.

It was not long till fashion began to creep into ready-mades; when the proud superiority of the young man who had got his clothes from the town tailor began to change to regret when he beheld a ready-made suit on a neighbor which cost little more than half as much as his own and fitted him quite as well if not better. Makers began to study styles and individual tastes. They used better and more inexpensive cloth. Trimmings became more artistic and workmanship, not always the best it must be said, became cheap. Now the most fastidious Canadian may go to a ready-made clothing establishment and get himself completely fitted out for suit and overcoat to his entire satisfaction. Or he may do the same in a large retail or department store. Tailoring methods introduced into the factory have been supplemented in the store where the customer's measure is taken for a ready-made suit. In style the cue is taken from New York. In fit and workmanship the customer is usually satisfied to take his chances by paying thirty to fifty per cent. less than the same cloth would cost him made up by a tailor. In quality of goods the custom tailor has but slight advantage, as ready-mades now consist of the very best output of domestic looms and in some cases are made from imported webs. Many suits are made by a combination of custom tailoring and factory work.

As a consequence from 80 to 90 per cent. of men's clothes in Canada are now made in the factory. This includes brown ducks, blue jeans, and all coarse makes. The trade has increased to such dimensions that in 1903 less than $10,000 worth of ready-made clothes were imported from the United States. Montreal, which is the great centre of factory-made clothing, has 61 wholesale clothiers, Toronto 15, Hamilton 2. Some of these have branches in every province, and in almost every city in Canada. Importations from England in 1904 were chiefly in a very few lines of superior make, and consisted nearly altogether in smoking jackets, dressing gowns and Jack Tar cotton suits for boys. In waterproofs Canadian makers are now buying cravenettes abroad and making them up in Canada. The demand in all lines is now for better ready-made clothes. Having got over the stigma of wearing "hand-me-downs," the customer has become so accustomed to style and finish in such clothes that he no longer feels easy with the $5 suit that used to satisfy him a few years ago.

In ducks and blue jeans, overalls and all cottonade productions, Canada enjoys a pre-eminence. There has always been a big demand for these goods in this country. But for brown duck and all of its family Canada never would have been where it is to-day in commercial development. Brown duck chopped the forest and cleared up the farm; it built the barn and the warehouse. Blue jeans have built the railways and opened the mines. Once the farmer's overalls and smocks were made by the farmer's wife; but hand-made garments of duck have practically ceased to be.

Cloaks and mantles for ladies bulk less in figures, but have become an important industry. Most of the goods for these are imported, but in covert cloths and whipcords, however, the Canadian-made fabric holds the field. A handicap exists here, caused by the fact that the Canadian cloth-maker has not been able to specialize enough to meet the demand for variety in texture and pattern.

Whitewear has become a large feature of the clothing trade, along with the blouse, the shirt waist, and the factory-made suits for women. Improved high-speed machinery has cheapened the making, always comparatively cheap, owing to the abundance of thrifty female help. In five years the whitewear branch of the trade has doubled, and is estimated to be six times what it was ten years ago.

In general women's dressmaking the progress of factory-made goods has been similar to that in men's garments, but somewhat less rapid in overtaking the dressmakers' output. The complete census for 1901 gives to dressmakers' products—Capital, $2,492,-118; output, value, $4,368,580; to factory-mades, capital, $1,051,-481; value of products, $2,190,627. This disparity is due to feminine caprices and the greater facilities that exist for fitting and catering to the masculine trade. In the development of the factory-made industry, however, what holds true of factory-made clothes for men holds true quite as largely in the case of women. Styles are studied and dressmakers' methods employed. Importations in these lines are rare, the only lines being hand-sewn goods from France and Ireland, the product of cheap peasant labor. Most of the cotton is English. Trimmings are foreign, embroideries from Switzerland, laces from France and England, braids from Germany.

The piecework system prevails in the making of whitewear, all of which is made in light, clean factories. No sweatshop labor is employed. Indeed, this sort of labor is now unknown in Canada. The conditions of labor in the average clothing factory are so much more aesthetic than those of many other industries depending on female help, that no trouble is experienced in getting all the help required. Most girls prefer making clothes in factories, where hours and work are regular, to working as domestics in houses where nothing is regular but the pay.

Underwear and hosiery occupy a leading place in this group of clothing industries. Canadian knitted goods have won a large place, not only in the home market, but abroad. Mexico, Australia and New Zealand have already found out how excellent are the underclothes and the hosiery of Canada. One mammoth firm alone in one small town produced goods in a single year worth nearly $4,000,000. Canadian yarns are largely but not exclusively used. Foreign yarns are imported to the extent of



A. E. Rae & Co., Ltd., Toronto..

furnishing the raw material for about half the country's output in underwear and hosiery. Female labor, of course, is largely employed, and most of it Canadian, only 2 per cent. being foreign.

As to men's furnishings, Canada is steadily forging ahead. For shirts, both coarse and fine, colored and white, for collars and cuffs, handkerchiefs and neckties, no Canadian needs now to hanker after foreign makes. This branch of the clothing trade



The Lowndes Co., Ltd., Toronto.

has developed within the last few years into very large proportions.

Last, but not by millions least, come hats, caps, furs and gloves. The total value of output from hat and cap factories alone in 1901 was more than one dollar per capita of population. A large branch of this industry is fur-making. This is natural. Furs are grown in Canada, as every schoolboy knows. The paradox is that at the closing days of the Hudson Bay Company fur regime the manufacture of furs is mounting to its zenith. It is now no longer necessary to send to London for a cape, a beaver coat, a mantle, a muff or a collar, the fur of which was caught by Canadian trappers and made up by English furriers. Canadian furriers have reached out and taken up a considerable share of the raw fur trade in this country. Not content with this, large firms, of which there are at least half a dozen in Toronto, and still more in Montreal, send buyers regularly to Europe and Asia for raw furs. These are dressed and made up ready for the most exclusive customer in Canadian factories, thus bringing home to this country the finished product end of an industry which has always been hers as a producer of raw furs.

Canadian mitts are historic. They date back to the old-three-ply hand-mades knit by "ma" with the old needles in the evening, while "pa" read the weekly newspaper. They were traded to the village storekeeper for sugar and tea, afterwards sold by him at 50 cents a pair. Now they are made more cheaply and quite as well in factories, though more in the leather lines than in the pure wool. Gloves have followed suit, not only in heavy work varieties, but also in finest kids and the most expensive makes of fashionable goods. The total output of Canadian gloves and mitts in 1905 was valued at $1,024,245.

Subsidiary industries belonging to this group are the making of laces, corsets, embroideries, fancy goods, feathers, threads, braids and elastics, fringes and tassels. Goods in these lines products in 1901 were valued at nearly two million dollars, chief items being buttons, $277,500; braids, $100,000; corsets, $592,341; fringes and tassels, $126,311; fancy goods, $217,514.

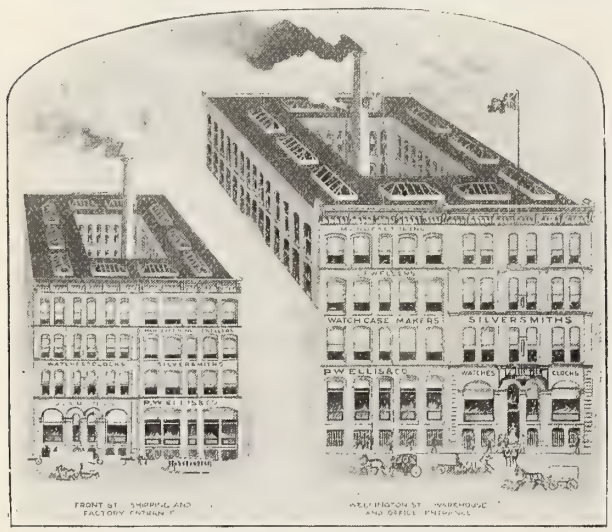
Contracts have at last been awarded for the construction of the international tunnel beneath the Detroit River, and within three months work will actually have begun. It is estimated that two and a half years will be required to complete the gigantic enterprise, the cost of which will approximate seven and a half millions. The tunnel will be exactly two miles in length, from approach to approach. Twin tubes will be laid beneath the river, all encased in one subway with a distance of thirty feet between them. Electric traction will be the motive power used.

JEWELLRY AND SILVERWARE.

The jewellery industry of any country acts as a sort of commercial barometer, indicating the degree of the general prosperity. It is the first to feel the approach of hard times, and the last to recover from them.

Taking for granted the truth of this well-known axiom, it may be inferred that the people of Canada are in a highly prosperous state. The demand for jewellery and silverware, along with the other luxuries of life, has reached large proportions and is rapidly expanding. The jewellery and silver plate manufacturers have been thriving for the last ten or fifteen years, and at the present time are busy making enlargements in order to provide for the increasing volume of business.

Perhaps more than any other, the Canadian jewellery industry owes its existence to a protective tariff. The National Policy was its foster mother. Prior to 1879 practically no jewellery was manufactured in this country, with the exception of a few wedding rings, which were made principally to order. Great Britain supplied the most of the jewellery used. The duty was first 15 and afterwards 17½ per cent., quite insufficient to encourage the establishment of home factories, while it was enough to make jewellery dear to the consumer. But with the raising of the tariff in 1879 the infant jewellery industry sprang into life; and, growing in the course of years, has to-day almost entirely



P. W. Ellis & Co., Ltd., Toronto.

supplanted foreign goods in the Canadian market, at the same time greatly cheapening prices to the consumer. Furthermore it is able to export considerable quantities of certain lines to scattered portions of the globe in competition with the largest and best manufacturers of all countries.

Solid Gold and Silver.

Discussing first the solid gold and silver jewellery branch of the trade, we find that to Mr. P. W. Ellis, now head of P. W. Ellis & Co., Limited, Toronto, is generally conceded precedence as being the first manufacturer of importance in Canada. He started a factory in Toronto about 1877. The chief development since has been along this line, and there are to-day forty factories in operation in Canada, employing more than one thousand hands engaged in the industry. As the result Canadian manufacturers have practically secured control of the home market, imports having been reduced to a minimum. The quality of goods is equal to the best. Indeed, it may be stated without hesitation, that Canadian factories are prepared to duplicate any piece of jewellery that may be shown to them.

To ilustrate the fact that Canadian workmanship in the finer branches of the jewellery industry is unsurpassed, it may be mentioned that our settings of precious stones are favorites with tourists from the United States. Diamonds are imported duty free, as compared with a duty of 10 per cent. in the United States, so that not only are our diamond settings equal in quality, but they are cheaper than the diamond jewellery of the United States. Upwards of three-quarters of a million dollars worth of unset diamonds are brought in annually, nearly all of which are set in Canada.

Gold and Silver Plate.

The only gold plated jewellery made in Canada consists of rolled plate chains. Four fair sized factories, employing probably one hundred and fifty hands, are engaged in this work, and supply about three-fourths of the trade. These factories are flourishing, and it is only a question of time until other kinds of rolled plate jewellery are manufactured here.

A very important subdivision of the jewellery industry in Canada embraces the manufacture of silver plate ware. It began with the raising of the duty in 1879, which induced United States manufacturers to establish branch factories in Canada. Simpson, Hall, Miller & Co., were the pioneers, and they were followed by the Meriden Britannia Co., of Hamilton. The Toronto Silver Plate Co. was established with Canadian capital, and later, the Acme now the Standard Silver Co., also of Toronto, entered the business. At present six hundred hands are employed in the various factories, and the output is estimated at close on to a million dollars per annum.

Sterling Silverware.

Another division of the industry comprises the manufacture of sterling silverware—an industry which has branched off from the silver plate industry. At least seven large factories, employing fully four hundred hands, are engaged in turning out numerous handsome designs in flat ware (including knives, forks, spoons, etc.), hollow ware, souvenirs and silver-mounted cut glass. The development has been particularly rapid since 1896. The number of employes has increased enormously and the size of the factories has grown in proportion.

A remarkable development has also occurred during the last twelve years in the manufacture of silver enamelled jewellery. To-day Canadian jewellers can successfully compete with the world in this line, and large quantities are exported. The goods produced include a great variety of souvenirs, such as enamelled pins, brooches, buckles, etc. The use of enamelled jewellery has been a fad during the last fifteen years, and to-day is more popular than ever.

The machinery for making sterling silverware is of an expensive type, particularly the dies from which the various shapes and patterns are struck. The small storerooms in which these dies are kept represent a large investment of capital. In this connection Canadian manufacturers labor under a disadvantage, in that their market will not take as many finished articles from the one die as will the United States market. The fact that they have succeeded in spite of this fact is a mark of their perseverance and enterprise.

The general remark applies to both the silver plate and sterling silverware factories, that they are practically a duplicate of United States factories. The same machinery and the same designs are used, and the original workmen came from the country to the south. The goods produced are the equal of any made in the world, and prices under the present tariff are lower than when only a revenue tariff was in force and all goods were imported. A significant fact is that the manufacturers are building

up a very substantial export trade, showing the appreciation in which Canadian goods are held in the markets of the world.

Watch Cases.

The manufacture of watch cases forms the fourth important subdivision of the jewellery industry. No watch movements have as yet been made in Canada, but practically all the watch cases used are made in home factories—four in number—which are in a very prosperous condition.

The watch trade in Canada has passed through an interesting evolution during the last thirty years. At the time of Confederation American watches had not come into use. All the watches sold were either English or Swiss, and were imported as complete watches, movement and case combined. After the conclusion of the Civil War the American watch industry began to develop, and ultimately the machine-made watches made by the Waltham Co. won the day in Canada. At present the great bulk of the watch movements used are made in the Elgin and Waltham factories of the United States. Imports of English watches have diminished to about one per cent. of the total importation, and of Swiss watches to about ten per cent.

The secret of the success of United States watch movements is the element of interchangeability. As in other lines of manufacture, their tendency is to manufacture large quantities from uniform standards. As the consequence, not only are their watch movements and watch cases interchangeable, but the parts of the watch movements themselves are interchangeable. The English makers, on the other hand, have adhered conservatively to the old method of manufacturing complete watches, although recently a few rather abortive efforts have been made to adopt the American plan. The Swiss manufacturers, after they saw the export trade slip almost entirely out of their hands, started to introduce the American methods about fifteen years ago, with the result that the importation of Swiss movements into Canada, mostly of the very expensive kind, is now on the increase.

The following tables will illustrate the tendency of the imports of watch movements and complete watches:—

Imports of Watch Movements.

	From the United States.	From Switzerland.	From All Countries.
1886.	$156,283	$ 4,260	$164,780
1904.	583,131	155,756	754,605

Imports of Complete Watches.

	From the United States.	From Switzerland.	From All Countries.
1886.	$46,217	$72,608	$127,764
1904.	24,419	36,709	74,417

The movements form the basis for the watch case industry, and a wise policy has placed the duty on them as low as ten per cent., while a special arrangement with the United States manufacturers, whereby they allow jobbers a discount of 5 per cent., brings the duty down to one-half of this rate. Prior to 1887 the rate was twenty per cent., and as a result a great deal of smuggling was carried on. This disappeared almost immediately, as the lowness of the duty made the risk of smuggling not worth while.

Under the National Policy the duty on watch cases was raised from 17½ to 25 per cent. In 1891 it was further raised to 35 per cent., and in 1897 it was reduced by the present Government to 30 per cent.

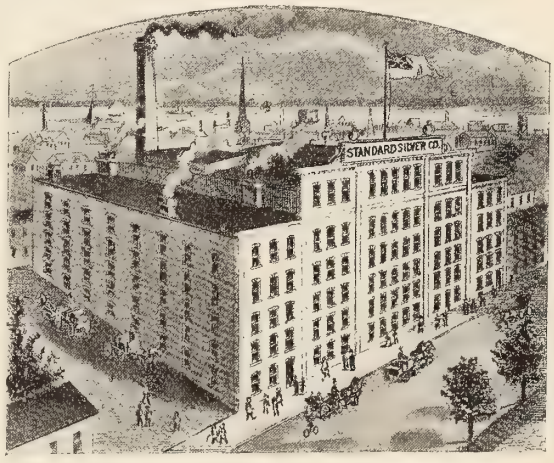
Under the protective tariff the industry has grown rapidly. A plant originally established by Mr. Crawford, of Guelph, in 1870, was bought by Mr. Quigley, of Toronto, about 1876, and the industry established by him became ultimately the American Watch Case Co., of Toronto, in 1885. There were then about twenty-five hands employed. To-day there are four factories in operation, giving work to two hundred and fifty hands, and producing an annual output valued at some half million dollars. These factories supply most of the market, what goods are imported being principally job lots sold at slaughter prices.

As a rule the mechanics who are employed in the jewellery and silverware factories of the Dominion form a valuable class of citizens. They are paid from twelve to twenty dollars per week, which means that a good workman need find no difficulty in earning his three dollars a day. The appearance of the average workman as he pursues his particular task is prepossessing, and the number of bright intelligent-looking young men to be found at the work benches speaks well for the future of the industry. A generation of Canadian artists has grown up and has, to all intents and purposes, absorbed the foreign workmen who were first employed.

The Future.

In conclusion, a word or two may be added as to the future of the jewellery industry. The immediate outlook is unquestionably bright, and no threatening clouds are visible on the horizon. With the growth of a monied class, and the general prosperity of the country, the manufacturers are doing a good business. The coming development of our great North-West and the beginning of a new era of railway expansion afford reason to hope that the prosperity of the country will continue, and, if so, the jewellery industry will benefit.

At the same time it must be remembered that the dependence of the jewellery industry on the general prosperity has its dark as well as its bright side. In hard times the jewellery trade suffers in two directions. In the first place there will not be the same demand as at present, and worse still the market will be flooded



STANDARD SILVER CO., LTD., TORONTO.

with the surplus product of the United States factories. As intimated above, the effect of such competition is felt to a more or less degree even in prosperous days. To secure the entire trade and to insure against the danger of a United States invasion the manufacturers are asking that the duty be restored to 35 per cent., its former rate. As the history of the industry has conclusively proved this would not result in higher prices to the consumer, whereas it would retain in Canada the money which now goes to United States manufacturers, and strengthen an industry which gives employment to Canadian workmen and returns dividends on Canadian capital.

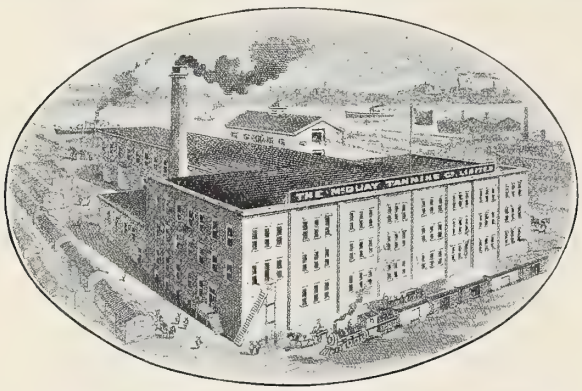
The Canadian Trade Index, 1905.

A fourth edition of the Canadian Trade Index, the only official directory of the members of the Canadian Manufacturers' Association, is now in course of preparation, and will be published just as soon as the information can be compiled. It will consist of 10,000 copies, of at least 600 pages. The distribution will be carefully managed, through agents and correspondents of the Association, by whose help it regularly finds its way to the large buyers of every country in the world. No single undertaking has done so much to increase Canada's export trade as the careful publication and judicious distribution of the three previous issues of this Index.

TANNING.

Some sage, to fortune and to fame unknown, once gave utterance to the memorable words, "There is nothing like leather."

Be that as it may, it is undoubtedly true that few branches of manufacture in Canada show greater advancement during the past thirty years than the tanning and finishing of leather. From being a comparatively simple process it has developed and divided into a number of distinct and complicated industries. In



THE MCQUAY TANNING CO., LTD., OWEN SOUND.

this, doubtless, our tanners have been spurred on by the restless activity of our great neighbor, whose genius for mechanical devices is proverbial. To-day there are few branches of leather manufacture that are not invaded by the ever-encroaching machine.

It may be that some of the old-school tanners regret the thorough-going hand work times of forty years ago, when hides were cheap and bark plentiful, and a comfortable profit was assured. The more exacting conditions of recent years have certainly eliminated many of the weaker and less progressive establishments.

The situation that faces the successful tanner to-day is not an easy one. He is confronted on the one hand by a gradual but irresistible advance in the prices of all raw materials and of labor, and on the other hand by the natural reluctance of the cutters of leather to submit to an adequate rise in his selling prices. He is never able to rest on his oars; he must be persistently aggressive and constantly on the alert for the adoption of new and better methods and the installing of more efficient machinery.

Probably to these exigencies, however, does he owe the proficiency he has attained in his business. Less than forty years ago Canadian tanners confined themselves almost exclusively to the cheaper grades of black leather. The higher grades, as well as all fancy and colored leathers, were imported from the United States and Europe. To-day Canada not only challenges comparison in all grades, but after supplying the local demand finds ready sale for her surplus product in Europe and Australia.

There are several principal causes that have contributed to the phenomenal progress made by the leather industry in Canada.

The first to be considered, perhaps, is the general progress of the country. During the past three decades Canada has developed from conditions more or less primitive to a position of national importance, and has become a competitor to be reckoned with in the markets of the world. This in itself implies progress in every branch of industry. The incidental effect on tanning has been to sweep out of existence many of the little local tanneries that employed but few men and turned out only the roughest kind of leather. With the improvement of general conditions the demand for this inferior product disappeared, and the little tannery with it. As the country grows richer, people demand better and finer leathers, and this has led to the centralization of leather manufacture in fewer and much more elaborate establishments. An idea of the weeding-out process that has been going on even in recent years may be formed from the following table:

Ten Years of Progress in Leather.

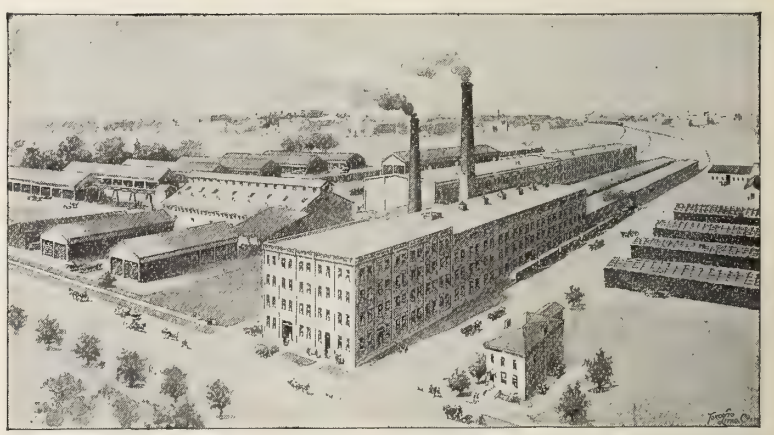
	1891.	1901.
Number of Establishments	802	143
Capital Employed	$ 4,071,835	$ 7,300,584
Number of Employees	4,203	3,607
Raw Material Handled	6,540,566	8,507,788
Value of Product	11,422,860	12,068,600

The marked decrease in the number of hands employed is due not only to the centralization of manufacture, but also to the increasing amount of work done by machinery. This suggests another cause for the development of the leather factories in Canada.

Improved Processes and Machinery.

There is not a year passes but some important innovation is made in tanning and finishing leather. Perhaps the inventions that have had the most far-reaching effect on the trade generally are the drum or wheel process of tannage and the graded system of vat tannage. By this latter process, which is more especially adapted to cowhide or heavy leathers, tannage is effected in almost half the time occupied by the old method and there is, moreover, a much higher percentage of the tannin utilized.

Formerly the hides were piled into entirely separated vats. In the present system the liquor runs from the leaches through a series of vats, and by a simple contrivance always enters the vat at the bottom and flows out at the top. From the last of the series the weakened liquor passes into the junk and is then returned to the leaches to be renewed. The hides themselves



THE LANG TANNING CO., LTD., BERLIN.

are suspended in the liquor from sticks so that every particle of surface is equally exposed to the tanning material. By placing a hide first in the weak liquor and gradually moving it forward until the strongest liquor is reached, most satisfactory results are obtained.

(Concluded on page 764.)

LEATHER GOODS.

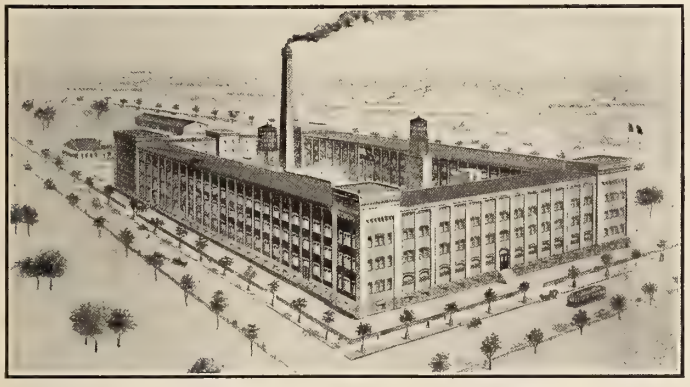
Manufacturers of every variety of leather goods, including boots and shoes, saddlery, harness, trunks, bags and belting, may truly be said to have kept well up with the strenuous pace set them by the Canadian tanners. Few trades in this country have more invested capital or employ a greater number of hands.

The Boot and Shoe Industry.

In Canada to-day there are over sixty wholesale manufacturers of boots and shoes, whose capital has been estimated at $6,000,000, and the value of whose annual product is in the neighborhood of $12,000,000. The factories are distributed throughout the country, as far east as Halifax, and west to the limits of Ontario, but the centre of the industry is to be found in the city of Quebec, where there are about twenty-five establishments in operation. Montreal also has a large number of factories, including some of the most important in the country. Yet forty years ago there were no boot and shoe factories, in the sense that we use that word to-day. Practically all footwear was made by hand and scarcely any machinery was used, even in the simplest processes. To-day only a very small proportion of the boots consumed are made by hand.

The Canadian shoe industry is one of which we can be justly proud. It pays wages to thousands of Canadian families, it engages several millions of dollars of capital and it consumes great quantities of goods that are manufactured in the country, such as leather, cotton, thread, machinery and paper. One thing that is essential for the satisfactory carrying on of the boot and shoe industry is suitable leather at a suitable price. For the production of sole leather Canada is pre-eminently fitted. Her supplies of bark are such that she can import hides, manufacture what leather she requires for domestic consumption, and export what is left in competition with the whole world. The Canadian tanning process has improved by leaps and bounds, and even in the high grades our own leathers have been able to supplant the foreign article. The more extensive enamelled and patent leathers are now successfully manufactured in Canada.

One of the great difficulties that the Canadian boot and shoe manufacturer has had to contend with, has been the necessity of making an immense number of different kinds of shoes. There are nearly five hundred different kinds of shoes to be produced, and the consequent changing of machines results in great loss of time, besides other disadvantages. Our largest factories have found it impossible to do business in a satisfactory way unless



The James McCready Co., Ltd., Montreal.

they are prepared to turn out everything from a baby's slipper to a man's rubber boot. In the United States, on the other hand, the large factories are able to specialize in particular lines. Some of them turn out daily 10,000 pairs of the same grade shoe. In this way they save the expense of changing machinery, lasts, etc., and can concentrate their energy upon individual lines. Some of our medium sized factories have been able to adopt this plan, but the demand is not as yet sufficiently great to allow the larger concerns to start upon such a course.



J. Eveleigh & Co., Montreal.

In 1904 the total value of boots and shoes imported into Canada for home consumption was $996,150, as against $742,773 in the preceding year. Of this amount $960,454 came from the United States. While this probably represents no more than 10 per cent. of the total consumption of boots and shoes in Canada, almost all the shoes imported are of a fine grade and form a substantial percentage of the consumption of the high grades. It has been said that about $4,000,000 worth of Goodyear welts and turns are made in Canada, so that the United States' factories supply about 20 per cent. of the high grade footwear bought by Canadians. The large amount imported cannot be attributed to the superiority of the foreign article. The United States shoe is as a rule well appearing, but lacks the wearing qualities. The value of the article is everywhere cut down as much as possible. Our Canadian houses are now paying special attention to the appearance of their product, and while they can turn out a boot in every respect as handsome as the one produced by the United States manufacturer, they claim that it affords longer wear and better quality. The Canadian manufacturer has had many disadvantages to work under, including a duty of from 15 to 35 per cent. on a number of his raw materials. When the Canadian boot manufacturer can get the tariff on his finished article raised from 25 to 35 per cent., he should readily be able to control the home market.

Exports.

In the year 1904, Canada exported $161,661 worth of boots and shoes as against $152,465 in 1903, and $86,118 in 1900. Of this amount $2,731 went to Great Britain, $34,501 to the United States and $72,518 to Newfoundland. It is worthy of ote that the value of boots and shoes shipped to Newfoundland in 1904 was over $10,000 greater than in 1903. This includes both fine and coarse grades, some of our manufacturers of high grade boots having advertised their boots successfully in foreign markets. There is no doubt that in time as Canadian-made boots become more widely known, their sale will extend to every part of the civilized world.

Leather Belting.

The leather belting industry of the Dominion has reached a high stage of development and the quality produced has been so good that it has managed practically to stamp out all importers in this line.

There are ten belting factories in Canada, of which three tan their own leather. The centre of the industry is really to be found in Montreal. The firms are large concerns employing about 100 hands each, and the three which combine a tanning process are the most successful. It is not by any means necessary to go abroad to find high class tanned leather. We have been able to make it at home. It is at all times difficult to ascertain the exact output of different establishments, but it can be safely said that every year the belting factories of Canada turn out goods valued in the neighborhood of $700,000. This is practically the amount of belting consumed in the country.

The manufacturers endeavor as far as possible to get their hides at home, but sometimes this is no easy task. The market is often short of supplies and relief must be sought in Great Britain or elsewhere. The growing export business in live stock means the carrying away of many thousand hides from Canadian shores each year.

The comparative smallness of the imports of leather belting is shown by the following figures: In 1902 the value received was $43,995; 1903, $58,599, and 1904, $55,167, in spite of a growing demand necessitated by an increasing population. Leather belting manufacturers have not as yet developed their export trade. They have been too much concerned in holding the home market, to devise means to sell their goods abroad. The United States market is guarded by a 40 per cent. tariff wall, which has so far withstood any attempt of the Canadian manufacturer to enter the field.

Harness and Saddlery.

There are about twenty wholesale harness factories in Canada, not taking into account the large number of shops which employ one or two hands each. In fact every town and village has its harness maker, but these cannot be ranked in the manufacturing class. The first large harness factories were established about 1870 and now fully 1,200 hands are engaged in the manufacture of this article. The output of these factories is estimated at well over $1,000,000 a year, but this is increasing steadily, and such public enterprises as the Grand Trunk Pacific when they open up vast tracts of country to the settler, promise a boom for the manufacture of harness.

On account of the high quality of Canadian-made goods, there is not much inducement to the foreigner to bring in his harness. In 1904 there was only $95,076 of foreign-made harness consumed in Canada, as against $1,000,000 of the home made article. Canada exported $13,114 worth of this line last year, the chief places for its sale being England, South Africa, New Zealand and Australia. In all probability within the near future, Canadian goods will be more generally shipped to South Africa, now that direct steamship connection has been established between there and Canada. Canada can certainly compete with the world in the lighter grades of harness.

The mountings for harness, such as brass and malleable iron, are, as a rule, made at home, but some extra fine grades are imported. Harness hardware is now made in the large factories at St. Catharines, Whitby and Gananoque, Ontario.

Trunks and Valises.

The Canadian trunk and valise industry claims about ten large factories, employing over 600 hands. So ably has it been conducted that practically not a trunk is brought into Canada for sale, although there is a small importation of fancy bags, suit cases and purses. English bags have been able to secure entrance to the Canadian market on account of the British preferential duty. The leather for the trunks and valises is obtained principally in Canada, but some special linings are imported from England and the United States. The trade is steadily increasing and at the same time the quality of the goods produced is improving. There is a fair demand for a better class of bags and an increasing consumption of suit cases.

Leather Generally.

Some interesting figures are supplied by the Government Blue Book regarding the growth in Canada's export trade in leather and manufactures of leather. In 1868 the value of such goods exported was $112,094, in 1893 it was $1,002,729, and in 1904, $2,427,270.

Canadian goods are evidently being appreciated abroad.

TANNING.

(*Continued from page* 762.)

The drum tannage is to-day employed almost entirely in the tanning of light leathers such as sheep, goat and calf. In these wheels or drums so great a variety of tanning extracts, both vegetable and mineral, can be used, and with such rapid results, that the advantages are obvious. Some large heavy leather tanneries also use this wheel system exclusively, while others use it in combination with the vat system described above.

Another important development of recent years is the making of tanning extracts, both liquid and solid, to take the place of hemlock and oak barks. While hemlock bark is still perhaps the most common tanning material in Canada, the constant advance in price is bound sooner or later to displace it in favor of cheaper tannages. It may be remarked also that when the time comes that our tanneries can be cheaply run by imported electric power, and when the spent bark can no longer be utilized as fuel, then the day of hemlock bark will be ended.

It is impossible, of course, to refer even briefly to each of the many machines that modern ingenuity has put at the disposal of the tanner. Of these machines the more complicated are still imported from the United States, but it is gratifying to know that many of those in general use are now manufactured in this country. Undoubtedly the most remarkable of leather-working machines is the improved belt knife splitter. When properly adjusted and handled, it is capable of splitting from a hide a sheet as thin as paper. Another important machine in the treatment of fancy leathers is the embosser. With this any pattern or grain may be stamped indelibly upon the finest leather. This fancy leather which with the aniline dyes is manufactured in the most attractive colors has created for itself a new and very extensive market, and new lines of leather goods are constantly making their appearance.

Imports and Exports.

An incident of importance to the tanners of this country is the establishment of abattoirs in our principal centres. This means that a supply of the best class of hides is to be had within easy distance. We still import about $5,000,000 annually in hides and skins, but this amount includes a large number of sheep and goat skins of species that cannot be obtained in Canada, and the South American dried hides used for sole leather. There is, however, a contra account to be considered, since we export hides to the value of about $2,000,000. These, it may be said, are principally inferior grades. In this connection it must be remembered that the great cattle ranches of the West give promise of a more abundant home supply in the near future.

As to our trade abroad, there are in Canada some 33 tanners who do more or less export trade. In 1904 our total export of leathers amounted to $2,150,648. This may not appear to be a very large amount, but it represents merely the surplus after supplying the constantly growing demand of our own country.

A general review of the leather trade in Canada is encouraging. With our great North-West opening up so rapidly and a second trans-continental railway in the course of construction, the demand for leather must continually increase. At the present time the tanning industry is confined almost entirely to Ontario and Quebec, with a few important establishments in the Maritime Provinces. These conditions will probably prevail for some years at least, as the West with its magnificent distances presents no special attractions to the trade.

That the Canadian tanners themselves take an optimistic view of the future is evidenced by the yearly increase of capital invested and the incessant improvements of their plants.

Printing and Publishing.

That the printing and paper trades in Canada are in a vigorous condition was one of the facts demonstrated by Toronto's $10,000,000 fire in 1904. In that fire practically the entire wholesale stationery business of Canada, as well as a number of the largest printing establishments in the country, were wiped out.



One of Canada's Most Up-to-date Printing Offices.

In less than a year every establishment was in full running order in enlarged premises, doing a larger business than ever.

There are six daily newspapers in the city of Toronto, whose aggregate consumption of paper per week is not less than 95 tons. With this may be coupled the statement of the Dominion Statistician, that by the census of 1901, 85.6 per cent. of the whole population over five years of age were able to both read and write, an increase in ten years of 6.5 per cent. This is a high rating, and it must be remembered that most of the illiterates comprised in the 14.6 per cent. are to be found among the foreigners, half-breeds, and Indians in the North-West.

The Reading Habit.

Newspaper reading has become a pronounced national habit in Canada, less marked in our cities than those of the United States, but more evenly diffused throughout the country. A prominent English visitor, who recently spent a week among some Ontario farmers living in the back townships, testified that they were remarkably intelligent, far more so than the average English farmer. This may be said of all the country places in Canada. Isolation in geography begets a desire to keep in touch with centres by reading. In towns and cities, owing to excellent educational systems, the average of literacy is high, and the reading general.

This diffusion of intelligence is a fundamental fact, so far as the printing and publishing trades are concerned. The comparative decadence of oratory and the growing function of the newspaper go hand in hand more markedly in Canada than in England, where eminent speakers are within twenty-four hours' ride of almost everybody. The magazine habit has become likewise pronounced, copiously fed by periodicals from the United States and England, chiefly the former. The large magazine Saturday issue of the daily paper has followed here along the lines of the Sunday special in the United States. And everywhere in this huge country now it is the length of a revolution back to the day when the weekly newspaper supplied the literary needs of the country, and when all the paper printed in all Canada in one week scarcely equalled the amount consumed by the big web presses of Toronto and Montreal in a single day

With a general healthy growth of reading, based on a large preponderance of English-speaking population and good educational systems, it is not surprising to note that in 1904 Canada possessed 115 daily papers, 3 tri-weeklies, 35 semi-weeklies, 850 weeklies, 2 bi-weeklies, 30 semi-monthlies, 200 monthlies, 1 tri-monthly, 2 bi-monthlies, and 10 quarterlies.

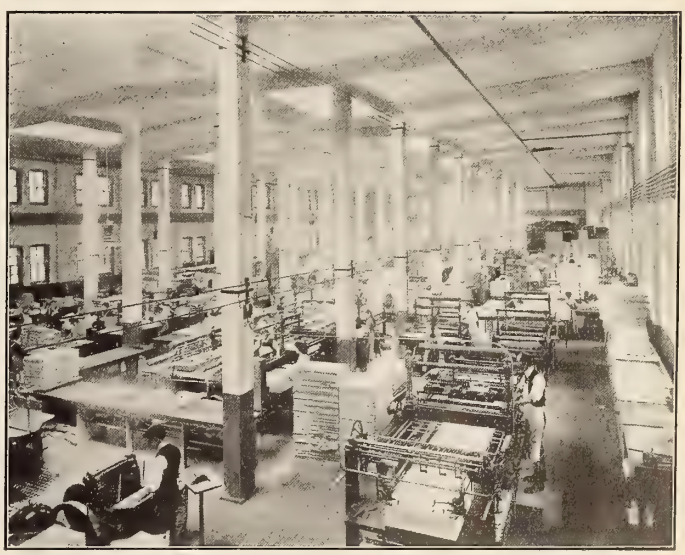
It is estimated that the paper mills of Canada produce every 24 hours 1,300,000 lbs. of paper. What percentage of this is news and book print can only be surmised from considering the above figures. The printing establishments of Canada are progressing quite as rapidly as any other branch of industry. In value of invested property and of annual production they stand well to the front.

Printing and Publishing in Canada for 1901.

	Number of Concerns	Capital	Hands	Wages	Value of Products
Bookbinding	84	$2,830,814	2,484	$ 845,307	$ 2,748,356
Printing, Publishing, Engraving and Lithographing	19	13,776,039	7,708	3,270,077	10,319,241
Electro-stereotyping	4	88,563	50	28,600	90,034
Stationery	12	590,555	482	140,155	638,520

Comparison of the above figures with those of 1891 show a decade of almost astonishing progress, than which there is no better index to the general progress of the country.

The average assessment per capita for reading in Canada, based on capital invested, is nearly $2.50; in 1891 the rate was only $1.85. This increase has been in spite of a decade of foreign immigration. In ten years bookbinding increased in invested capital almost 400 per cent., and in value of production 250 per cent. Printing and publishing, including both engraving and lithographing, jumped nearly four million dollars in invested capital and two million dollars in annual production, while adding more than a million to wages paid.

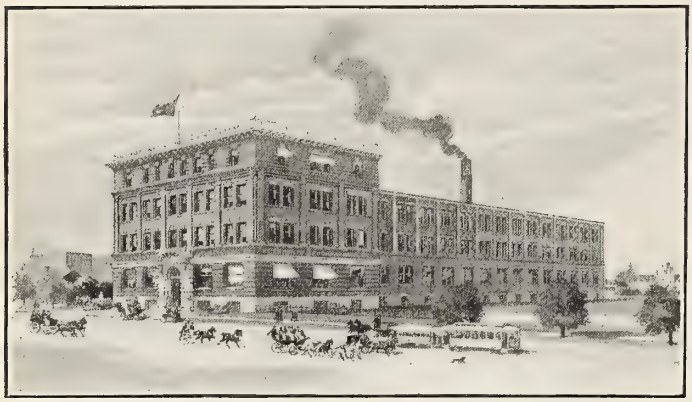


Stationery Department in the Same Establishment.

Improvements in Equipment.

One modern factor in these increases may be noted in the growth of electro-stereotyping of more than 500 per cent. in amount of capital invested and more than a doubling of value in production. The typesetting machine and the web press have

invaded all the large printing offices in Canada. Hand-setting, except for display purposes, is practically unknown outside of villages and small towns. One mammoth three-deck press in Toronto cost more than the whole plant of a town printer a few years ago; the dozen linotype machines used on the same paper costing almost as much. In modern improvements, Canadian



The Toronto Lithographing Co., Ltd., Toronto.

printing and publishing houses are not behind any in the United States.

Engraving, lithography, and color-printing have become established as a profitable business. Not so many years ago such establishments were a mere experiment. There are in Toronto alone 17 concerns engaged in engraving and lithography. In the matter of color-printing, Canadian engravers are able to prepare plates capable of four distinct colors, and, if necessary, combining three colors to give the impression of eight. In Toronto alone there are 144 firms engaged in various branches of the printing, publishing and stationery trade. Many of these are doing work equal to the best on the continent. Their aggregate assessment is not less than $2,850,000. In Toronto also may be found engaged in the active publishing and bookbinding trades. 800 compositors, 95 pressmen, 220 feeders, 220 bookbinders, 400 bindery girls, and 26 stereotypers and electrotypers. The total wages paid per year amount to $721,224.

The Age of Specialization.

The tendency in all city establishments now is to specialize. The day has gone by when a printing-office ran off a newspaper at certain hours in the day, and the rest of the time devoted itself to printing auction sale bills, copies of by-laws, patent medicine literature, and a hundred other varieties of job-work. The job-office has begun to be detached from the newspaper plant, even in towns of 10,000. Jobbers have begun to set up for themselves. In the large cities the detachment took place years ago. Since then job-printing has been largely an evolution of specialties, such as printing of patent medicine literature, catalogues, trade papers, illustrated supplements, etc. Government printers have become crowded with work, and part of the printing of Government literature, of which annually hundreds of tons are sent over the country, has been farmed out to private concerns. One printer has specialized so far as to confine himself altogether to immigration literature, of which it may be surmised there is a good deal made in Canada just now.

Book-Publishing.

In book-making the advance has not attained to such magnitude, owing to the fact that the only kind of books actually produced out and out in Canada from copy and white paper to bound volume are school books and books about Canada. All others are imported in plates and printed here, and bound here for the Canadian market. There are several large publishing houses in Canada who derive a large percentage of their business from the reprinting of English and United States editions of books, on which the duty at 15 cents a pound is practically prohibitive. In the case of magazines there is practically no duty, but the postage, which in the case of United States periodicals, is one cent a pound. This has no effect in keeping out the tons of printed periodicals which reach us every week from across the border. Publishers here have been urging upon the Home Government a rebate of the high postage on English newspapers and magazines, and upon the Canadian Government a tariff postage on United States publications. They urge the one for patriotic reasons, the other on the ground that if the United States publisher were prohibited from flooding the Canadian market with his ten-cent magazine and his miscellaneous literature in paper form sent through the post-office duty free, he would be obliged either to leave the Canadian field to the Canadian publisher, or to set up a branch establishment in Canada.

At present, however, a large percentage of the reading done by Canadians is produced by the United States. This is to some extent inevitable. One feature of the case is that a majority of promising Canadian writers have migrated to the United States, where there exists a more specialized field and higher prices for copy. This has had the effect of robbing Canada of a large percentage of the men who ordinarily would furnish the raw material in the shape of copy on Canadian subjects for the printer. The paradox is that Canadian pens are engaged in writing on foreign subjects for Canadian readers to read. Once in a while an exiled Canadian scribe resident in New York or Chicago writes something about Canada for old sake's sake in a United States magazine; more rarely still for a Canadian publication. The drawback in Canada at present is the low rate paid for copy. The publishers claim that they are unable to pay more owing to the unrestricted competition of United States publications. If they had the field to themselves they claim they could pay more for copy, and specialize to a greater extent in publication. At present a big country brimful of problems, of business and of local literary color, is lying unexploited by Canadian pens, perhaps waiting till quill-drivers from the United States become interested in the country and begin to work it for their own publications.

That there is a bright future for Canadian literature, and, therefore, for Canadian book and magazine making, there is no sort of doubt. The conditions are all present, except the adequate employment of capital in that particular feature of the industry. If protection of the Canadian publisher would have



the effect of stimulating the Canadian writer and keeping him in the country as a maker of raw material for a certain branch of the publishing trade, there can at least be no harm in protection. For the present, activity in printing and publishing circles is decidedly marked; failures of publishers are rare, and the outlook is bright.

DRUGS AND CHEMICALS.

Chemistry in Canada, though highly respectable, is not able to boast a long ancestry. With so diversified a list of raw materials and so varied a cycle of industries, it was inevitable, however, that natural chemistry must have been a large factor long before practical science began to turn it to account. The chemical energy and products that went to waste in this country before the Canadian era of applied science began, has been on a par with the national waste of timber.

It is gratifying to note that Canadians are waking up to the economic forces of native chemistry, not only in the discovery of semi-manufactured raw material, such as oil and gas, not only in the utilization of bye-products in manufactures, but also in the higher departments of fine drug and chemical manufacturing.

Wood Alcohol, Acetic Acid and Ammonia.

One staple source of chemicals in Canada has of course been the forest. In this connection wood alcohol has become a heavy commercial feature. The alcohol is exported to Great Britain, France, Germany, Holland, Japan and Australia. The largest retort plant in the world is that of the Lake Superior Power Co., at Sault Ste. Marie, Ont. While there is no trouble getting markets for wood spirit, there is less profit from this branch of the industry than there will be when freight rates have been reduced sufficiently to admit of a free exportation of the residual



FREDERICK STEARNS & CO., WINDSOR.

charcoal for fuel. Acetic acid is freely obtained by the same process as that of wood spirit. It is a product of wood and lime, and as the limestones of Northern Canada, like its forests, are practically inexhaustible, there is at present no prospective limit to the production of this article. Incidental and almost basic preparations from this source are sulphites, bisulphites and chlorides of zinc. Ammonia is derived from a similar group by the destructive distillation of coal. This is a factor in various household trade preparations, as well as in the form of aqua ammonia and anhydrous liquid ammonia. The process is complex—milk of lime mixed with ammoniacal gas liquor, treated by steam and distilled through oil, charcoal, caustic alkali and tanks of distilled cool water, which absorbs the liberated gas and forms the ammonia of commerce. Anhydrous ammonia is produced from aqua ammonia by fractional distillations, liquefied by pressure and stored in hundred-pound welded cylinders. It is chiefly used as a refrigerant, a function which is yearly coming into larger use in the shipping and export trade of meat, butter, etc.

A highly important feature of this group of chemical industries is the manufacture of textile dyes, which in 1901 represented a capital of $1,388,500, and a total output valued at $2,051,992. This is by way of large contrast to the homely era when the farmer's wife who wanted to dye her "full cloth," went to the woods to gather butternuts and walnuts.

The Sulphur Group.

Similar to this group is the sulphur cycle, consisting of sulphites and bisulphites, utilized commercially on a large scale in the manufacture of chemical wood pulp. Canada contains sulphur enough to supply the entire home market with sulphuric acid, as well as to ship abroad. As yet, but few firms, the forerunners of more in the certain future, are engaged in this useful branch of the industry. Much of their output is used in the refining of petroleum, a process which consumes annually about five million pounds. Quebec, Ontario and British Columbia are the sources of this commercial acid. A plant at London, Ont., turns out fifteen tons of sulphuric acid per day. The 5,000 tons annually produced by this firm finds a ready utilization, not only in the refining of oil, but also among the manufacturers of leather, tacks, screws, nails and fertilizers, besides going into the hands of wholesale dyers and drug dealers. Phosphates for fertilizers form a large item in the output of this firm, the economic sources being native phosphates and bone-black rejected by the immense sugar refineries of eastern Canada. The acid phosphate of calcium becomes an item in the making of baking-powder, being less costly than cream of tartar and a better adjunct to the flour produced by the modern rolling mill.

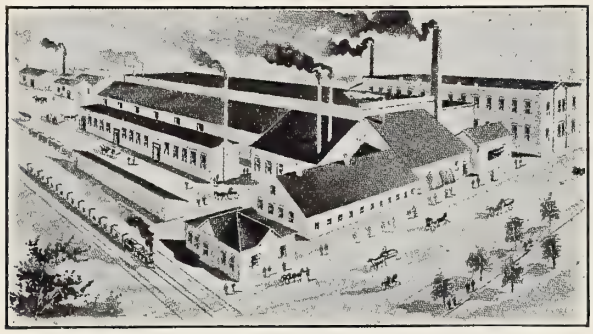
Intensive farming and heavy cropping and fruit-raising have begun to make even Canada, with its huge areas of fertile soil, a natural and expanding market for fertilizers. Especially is this true in older Canada where population has begun to encroach upon subsistence. Fortunately for the Canadian as well as the foreign agriculturist, the native supplies of fertilizing material are much more than abundant. The apatite deposits of the Ottawa Valley have been intermittently worked as a source of supply, in competition, however, with the phosphate industries of Florida and California. The Buckingham Electric Reduction Co., of Quebec, takes part of the apatite output of the Ottawa region for the manufacture of phosphorus. At Sydney, N.S., sulphate of ammonia is made by the Dominion Iron and Steel Co. The ammoniacal liquor bye-products of the Quebec, Ottawa and Toronto gas works are converted in Toronto by the Michigan Ammonia Co. In addition to this native supply of phosphates, fertilizers are produced on a large and thrifty scale from the bye-products of packing and canning factories.

Tar also has entered the field, and is steadily growing in demand, owing to the immense development of the asphalt paving and roofing industries, and the utilization of tar paper for building in new communities as well as by builders in towns and cities. Most of the tar produced is shipped to the United States. At Hamilton, Ont., exists a small distilling plant producing coal-tar oil. An English chemical company have located at Sydney, N.S., to utilize the coal tar produced from the immense coke-ovens of the Dominion Iron and Steel Works. These works are among the largest on the continent and supply not only the home trade, but ship as well to Europe and the United States.

Calcium Carbide and Carborundum.

The recent vogue of acetylene gas and other gases of that character for illuminants has brought into prominence calcium carbide on a large scale. The native source of this product is the Ottawa Valley, which has long been famous as the home of plumbago and the lead pencil, carbons for drawing, etc. Three carbide works are in operation in Canada, one at Ottawa, one at St. Catharines, and one at Shawinigan Falls, Que. Acetylene is

spreading in popularity as its virtues and peculiar habits are better understood. Canadians have utilized this illuminant generously in lighting houses, offices and churches, not only in cities and towns but in villages where electric light plants are unknown. It has also to some extent superseded electricity for



CANADA CHEMICAL MFG. CO., LTD., LONDON.

municipal street lighting. The market value of carbide is $61 a ton, which represents a good margin of profit to the producer.

Akin to carbide is carborundum, until ten years ago without a name in the world. This peculiarly civilized product, which for modernness almost equals radium, was, like carbide, an accidental discovery, and like carbide has come into a prominent place in industrial economics. It has begun to supplant emery in the manufacture of wheels, stones, razor hones, and rubbing bricks for marble and granite dressing. It is also used in the manufacture of paper and cloth.

Petroleum.

Another member of the semi-natural chemical group is petroleum, known for years as a feature of the coal oil trade in Petrolea and more recently in Leamington, where it is found in large paying quantities in conjunction with natural gas used to light and heat a whole town and at one time piped out to Detroit. The petroleum industry has become highly organized in Canada along the lines of development in other countries. The refineries at Sarnia have a capacity of 60,000 barrels of crude oil per month, and its market reaches from Halifax to Vancouver, quite independently of Mr. Rockefeller. Gas has also been prepared as a bye-product from petroleum, new discoveries of which are constantly being made, the most recent being those of Southern Alberta in the far west, and the Peace River country in the north. Petroleum is also found in Quebec, Nova Scotia and New Brunswick. The oil refineries of Canada in 1901 numbered 14, capitalized at $2,431,271, turning over products valued at $3,519,493. The recent discoveries of oil in the Essex Peninsula have given a fresh impetus to this industry.

Canada has also been busy making ink, photographic supplies, washing compounds, baking powder and patent medicines. In these variegated products it will be seen from the following figures that patent medicines lead by several large lengths:

	No. of Establishments.	Capital.	Employees.	Wages	Value of Products.
Patent Medicines.	35	$1,103,065	422	$117,625	$1,350,993
Ink.	3	46,700	17	7,556	105,000
Photographic Supplies..	9	119,126	96	31,880	230,186
Baking Powder and Flavoring Extracts..	13	273,965	150	44,219	524,016
Washing Compounds...	3	31,500	15	5,976	20,500

The patent medicine habit has become rooted in human nature in both town and country. It is satisfactory, however, to note that many of Canada's patent medicines are among the "top-notchers" for curative and stimulating properties, and all of them are under the ægis of the government analyst.

Soap.

Canadian soaps are made by 15 large concerns, employing 2,000 hands. These factories, many of them among the best equipped on the continent, represented in 1901 a capitalization of $2,321,207, employed 478 hands, distributed $163,300 in wages, and turned out products valued at $2,143,945. The figures for 1904, based on the excess of output, would be 45 per cent. in advance of those for 1901, not only because of normal expansion, but also on account of the establishment in Toronto of a large branch of a well-known Liverpool firm, capable of turning out 10,000 tons of soap in a year.

Raw materials for this industry are native tallow and imported oils from Africa, the Pacific Islands and the United States. A fast expanding home market more than keeps pace with an export trade largely as yet confined to the West Indies. Canadian soaps for all purposes from the most delicate caprices of the toilet to the coarse necessities of the washing-machine and scrub brush, are sterling products which, though they may not figure so lavishly on advertisement cards as those from the United States, are noticeably on the spot when real work is to be done. Last year the total value of all soaps manufactured in Canada, not including farmers' soft soap, was nearly $3,000,000, an advance of 45 per cent. on 1901. Glycerine is a refined product of this branch of the industry, limited as yet mainly to the output of one firm in Montreal, who handle yearly 10,000,000 pounds of waste lye.

Refined Chemicals.

Of refined chemicals Canada, for a comparatively raw, young country, has its share. In the highest and most delicate drug preparations, importations from England and France are still largely in excess of local manufactures. Many large drug institutions, however, are in operation in Toronto, Montreal and other centres. Most of them manufacture in large quantities heavy chemicals, such as sulphide, bisulphite, sulphate of soda, sulphite, lime and zinc salts, lactic acid and casein; also such high-class chemicals as gold and silver salts and medical brands, such as ether, chloroform, bromides, iodide of potassium, iron and zinc salts, scale preparations, acids of phosphorus, flavoring extracts, tinctures and syrups. Most of the raw materials are imported. The total product for 1901 of 19 firms in these lines was $1,380,905, with an invested capital of $1,606,608; hands employed, 524; wages paid, $199,019. Carbon dioxide is also manufactured in Toronto on a commercial scale for aerated waters, refining of sugar, spraying of trees and producing laboratory low temperatures. These, with their bye-products, Epsom and Glauber salts, find a market from ocean to ocean.

Incidental features of the chemical industry in Canada are the manufacture of explosives, coming into recent large proportions owing to the immense development of mining and railroading, exports last year being more than $200,000; glue-making, with an output in 1901 valued at $47,627; wax candles, value



PARK, DAVIS & CO., WALKERVILLE.

of products, $71,250; potash and pearl ash, $23,100; extract of bark, exports in 1904 valued at $69,660; salt works numbering 9, capitalized at $689,163, and turning out in 1901 products worth $345,128.

Canada's total exports of drugs, chemicals and medicines in 1904 were valued at $690,928. Of this amount $341,414 went to the United States.

PORTLAND CEMENT.

Those who have been patient enough to follow these articles from the beginning, cannot have failed to be impressed with the size of the family of industries to which Mother Canada has given birth.

It may be a relief to know that the end of the long procession is now almost within sight. The whole family has not been put



International Portland Cement Co., Ltd., Hull.

on exhibition—not by any means. Many a promising offspring will no doubt be conspicuous by its absence. But from the first-born down a general selection has been made of those that have assumed some degree of distinction.

And now we come to the baby. And Canada is proud of her baby industry. It is still but a youngster, barely fifteen years old, yet it is as big and lusty as many of its brothers twice the age. Its growth has been phenomenal. It has thrived on difficulties. Reared upon a vigorous diet of marl, clay and limestone, followed by the ordeal of the fiery furnace, it has developed a hardy constitution, a constitution which at the present time is standing it in good stead when it is being made the object of a perfect shower of blows from its bigger and stronger fellows in other countries.

Retrospective.

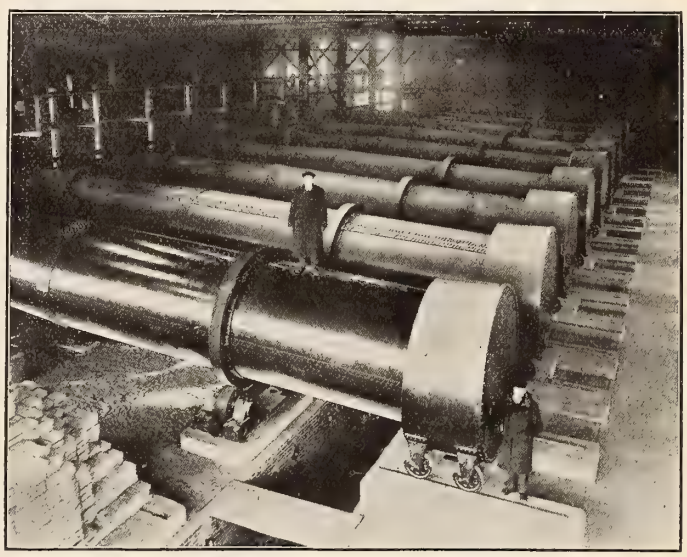
The manufacture of Portland cement in Canada dates from the year 1891. In that year operations were begun in a very small way at Marlbank, Hastings County, and also at Shallow Lake, Grey County, both in Ontario. The story of the early struggle of these plants for existence is one of absorbing interest. Economically standing upon a solid foundation, they hovered continually on the brink of ruin. Unforseen contingencies swallowed up their scant capital long before their equipment had approached a condition where it could manufacture to advantage. Inexperienced management, in endeavoring to adapt an old industry to new conditions, was responsible for many a costly blunder which still further reduced the chances of success. As a result of their entire first year's operations, these two kilns were able to show an output of only 2,033 bbls. to their credit, a trifle more than one of the larger modern plants would produce in a single day.

But Canada's Portland cement industry is made of stern stuff. Confidence in its future has always been unbounded. Temporary embarrassments have only served to redouble the energies of its promoters, and persistence and determination have been followed by the inevitable result. The paltry production of 1891 was increased the following year to 20,247 bbls.; in 1893 it amounted to 31,924 bbls. and so on in geometrical progression, the output for each year during the next decade exceeding that of the preceding year roughly speaking by 50 per cent.

The Period of Expansion.

The first cement produced readily sold at the mills for $2.50 a bbl., a circumstance which will no doubt explain the reason why the cement manufacturer looks to the past for the golden age of his industry. In the face of foreign competition, the price gradually lowered until the $2.00 mark was reached. In 1896-97 the market dropped to $1.75, but the following year it recovered, and until 1900 remained fairly steady in the neighborhood of $2.00.

At this figure it was still possible to realize a handsome profit. To the prospective investor the word "handsome" seemed scarcely adequate. "Fabulous" he believed would have been much nearer the mark. The general situation was indeed one of the great promise to the manufacturer. Everything pointed to an ever increasing consumption of cement. Its production in other countries had received a tremendous impetus. Canadian statistics showed it to be steadily growing in favor as a building material, while the discovery that immense quantities of it could be used to advantage in other kinds of construction work seemed to open up possibilities of a market hitherto undreamed of. Add to these the fact that the raw ingredients were found to exist in abundance in various parts of Ontario, and it is little wonder that the industry underwent a most rapid development. In 1901 four factories were making Portland cement, their total output amounting to 350,660 bbls. By the following year the number of establishments had increased to eight, with an actual production of 522,899 bbls. In 1903 there were nine plants in operation, with an output of 695,260 bbls., while in 1904 cement was made at no less than eleven different establishments, to the extent of 880,871 bbls.



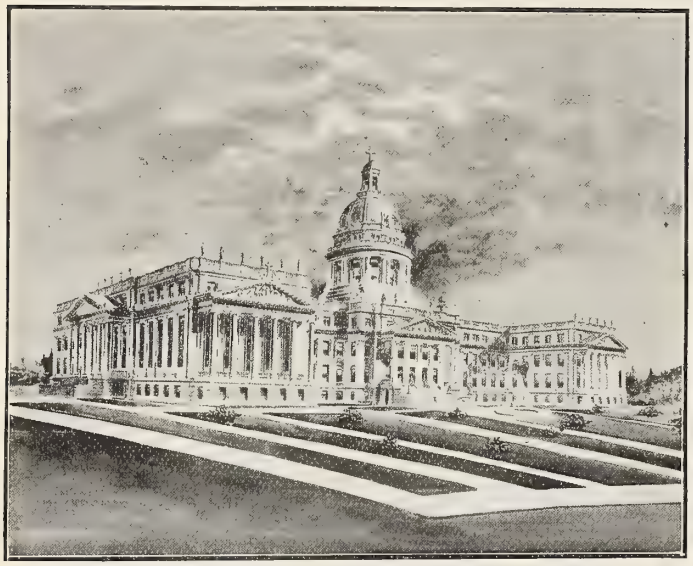
A Battery of 8 Rotary Kilns.

The following table showing the location, capacity and capitalization of the various plants operating in Ontario in 1904 may be of interest:—

Name	Location	Capital	Daily Capacity
Hanover Portland Cement Co.	Hanover	$ 500,000	650 bbls.
Lakefield " "	Lakefield	590,000	600 "
Sun " "	Owen Sound	500,000	500 "
Imperial " "	"	250,000	300 "
Owen Sound " "	"	199,000	1000 "
Grey & Bruce " "	"	100,000	300 "
Canadian " "	Marlbank and Strathcona	1,500,000	1500 "
National " "	Durham	1,000,000	1000 "
Raven Lake " "	Raven Lake	500,000	700 "
Ontario " "	Blue Lake	450,000	500 "
	Total	$5.589.000	7050

Since the first of the year three more large concerns have added figures of importance to our cement arithmetic. The works of the International Portland Cement Co., of Hull, Quebec,

are now in active operation with a daily capacity of 2,000 bbls. The Belleville Portland Cement Co., possessing splendid natural advantages, have begun manufacturing on a large scale by what is known as the dry rock process. At Wiarton, Ontario, the Colonial Portland Cement Co. have about completed the erection of another enormous establishment which will add 2,000



Ottawa University, A Sample of Portland Cement Architecture.

bbls. every 24 hours to our aggregate capacity. At Sydney, C.B., work is well under way on a plant which will utilize the slag from the blast furnaces for the manufacture of cement. Its projected capacity is 500 bbls. every 24 hours. There are of course a large number of other cement companies, which have as yet no existence except on paper. One of these, however, the Manitoba Cement Co., will proceed at once with the erection of a 500 bbl. plant at Morden, Man. When all of this construction work has been completed, Canada will be provided with sixteen Portland cement establishments, having a combined annual capacity of at least 3,915,000 bbls., estimating 300 working days to the year.

Imports and the Tariff.

With an equipment such as this, one might naturally look for a gradual falling-off in the importations of cement, and it is rather disappointing to find that such has not been the case. Indeed, not only have the imports not fallen off, but their volume, with the single exception of the last twelve months, has continued to keep steadily in advance of the native production. This fact is accounted for in two ways. The centralization of the industry in a comparatively small portion of Ontario has practically excluded Canadian cement from the markets of the Maritime Provinces and the Pacific Coast, for the rail haul to consuming points in these provinces more than equals the duty and ocean freight on foreign cement. This difficulty seems likely soon to be overcome through the establishment of plants at the points thus affected, and in the natural course of events the home market of eastern and western Canada should to a large extent be recovered by Canadian manufacturers.

The second cause contributing to the steady expansion of our import trade has been the practice of United States firms in dumping their surplus production of cement upon the markets of this country at slaughter prices. The dwarfing effect which the continuance of such a policy must have on the Canadian industry is only too apparent, and it is a matter of satisfaction to note that there is a growing public sentiment in favor of adopting restrictive measures which will effectually put a stop to this practice and allow free scope for the development of Canadian enterprise.

Canada's Consumption of Cement.

An approximate idea of the consumption of cement in Canada may be had by adding the imports to the annual output of Canadian plants. The resulting figures will of course be somewhat above the mark, in that they fail to take into account the stocks carried over from year to year unsold, but as these are known to have been fairly light, the totals should not be very far wrong. They are as follows:—

Year.	Canadian Output.	Imports.	Total.
1901	350,660	461,000	811,660
1902	522,899	577,876	1,100,775
1903	695,260	734,882	1,430,142
1904	880,871	784,631	1,665,502

At this rate of increase the consumption for 1905 should not be far short of 2,000,000 bbls., and from a general survey of the field it is gratifying to note that there are indications of the growth being maintained, not only for the present year but for several years to come. City contracts for local improvements continue to run into large figures; Winnipeg's requirements alone for 1905 will amount to 100,000 bbls. The increased price of lumber, and the frequency with which it requires to be renewed have practically sealed the fate of the wooden sidewalk, and the next decade should see thousands upon thousands of miles of permanent stone sidewalks constructed in various parts of Canada. The same cause, the scarcity of lumber, is proving a serious question with the railway companies, and tests, it is said, are now being conducted with a view to the general adoption of cement fence posts and ties. The use of timbers in bridges and culverts has likewise proved too costly, and a reaction has set in in favor of concrete. During the past year, between Ottawa and Brockville, the Canadian Pacific Railway replaced 150 of their old wooden culverts with new ones of cement. Even stone masonry is beginning to be discarded by the railways in favor of the new material.

For general building purposes its popularity is steadily increasing. Hollow blocks of cement, of any size, shape or finish, are readily procurable, and since their introduction have been very much in demand. Architects are beginning to advocate the construction of walls of solid concrete, for not only do they possess the advantage of being absolutely fireproof, but they are capable of a handsome exterior as well. In fact, so obvious are the advantages of concrete as a building material that it has been able to force its way into the almost sacred precincts of college architecture, as instance the fact that the plans for the new Ottawa University building, with its classic dome and renaissance ornamentation, call for solid concrete con-



The Wm. A. Marsh Co., Ltd., Quebec.

struction. Even about the farm its use has become popularized, and especially in the matter of watering troughs, fence posts and stable flooring has its superiority over lumber been demonstrated.

The ever widening range of uses to which cement is being put

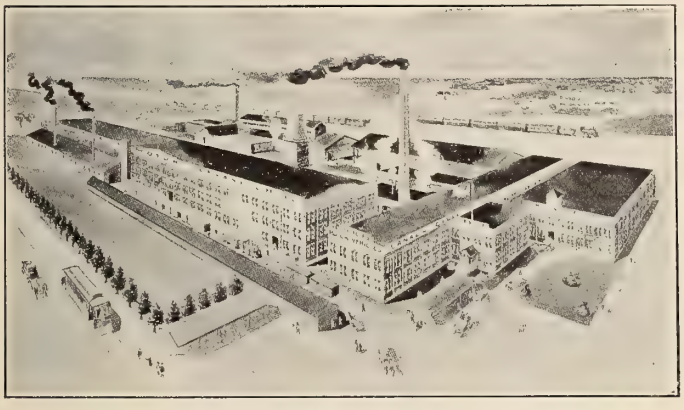
should of itself ensure a bright future for the industry. In Canada the demand is likely to be further stimulated by the enormous amount of construction work under way or projected. There is no question but that we are entering upon an era of unprecedented prosperity and development, and if it is to keep pace with the growing needs of the time, the Portland cement industry must expand into one of gigantic proportions.

Improved Methods of Manufacture.

Any account of the industry would be incomplete without a reference to the distinctive process of manufacture which has been evolved upon this continent. While originally an English invention, the rotary kiln is essentially American in its development. It has remained for American manufacturers to demonstrate its possibilities and to improve the methods of supplying it with fuel. Both vertical and rotary kilns are in use in this country, but modern practice seems to favor the latter. One advantage claimed for it is that it permits of a perfectly uniform temperature being maintained all through the calcining process, which in turn ensures a uniformity of grade. The large amount of coal consumed in drying the bricks for the vertical kilns is a serious difficulty in keeping down the cost by the old method of manufacture. With the rotary process this difficulty is overcome, for the cylinders receive the slurry while it is still wet, and providing cheap electric power can be had for revolving the rotaries a low cost of production is possible.

The necessity for economical operation, arising from keenness of competition, is responsible for many further improvements in Canadian plants during the past few years. Laborious hand processes have been eliminated. Specially designed machinery has been installed for handling the material as it passes from one operation to another. To such an extent has this been carried that in one plat, which averaged 1,600 bbls. per day of 24 hours, the raw materials are recovered from the earth, transported to the plant, weighed, crushed, mixed, tested, calcined, ground and bagged with the aid of less than 100 men.

With an abundance of cheap power, an abundance of raw material, unexcelled facilities for economical operation and a growing market, the cement industry should be able to give a good account of itself in the years to come. Its most pressing need at present is protection against the foreigner who uses Canada as a dumping ground for the surplus cement which he cannot sell



Canada Cycle & Motor Co., Ltd., Toronto Junction.

at home. This protection the makers are hopeful of securing, and once they are guaranteed the markets of their own country, it should not be long before Canadian brands are winning a name for themselves in the wider markets of the world.

The Imperial Steel & Wire Co., of Collingwood, has decided to double the capacity of its plant and will add the requisite machinery at once. It is running night and day turning out about 20 tons of wire every 24 hours, and has large orders ahead, which will keep it busy until July.

MISCELLANEOUS,

Developing so rapidly and with such varied classes of needs Canada has naturally evolved a large miscellaneous class of industries, impossible to schedule in a special description. The total number of industries in Canada is noted as upwards of



300. More than 200 of these exist as sundries, having their origin in some local necessity, some local supply of raw material, or as allied branches of fundamental industries.

These miscellaneous manufactures belong to all the leading sub-divisions based on raw material. To begin with wood products, the following is a list for 1901:

Wood-working Sundries.	Capital.	Value of Products.
Basket-making	$ 147,100	$ 152,842
Carpentering	1,402,044	5,340,582
Carving, etc.	60,152	113,000
Charcoal Burning	49,600	71,972
Cheese-box Making	88,336	93,700
Cigar-box Making	271,787	283,000
Coffins and Caskets	644,222	683,177
Cooperages	559,595	867,796
Cork Cutting	172,421	176,172
Linseed Oil	357,500	377,000
Lobster Cans	52,100	34,000
Packing Cases, etc.	1,681,028	1,927,720
Pails and Tubs	192,000	99,762
Paper Bags and Boxes	563,197	1,256,147
Paper and Cardboard Mills	7,743,359	4,527,776
Picture Frames	447,792	613,025
Press Stamps and Dies	941,192	139,000
Refrigerators	128,617	149,974
Seed Cleaning, etc.	502,900	1,472,087
Shook and Box Mills	107,416	293,225
Starch Factories	990,075	1,006,400
Trunk Making	636,000	987,900
Wall Paper	1,059,500	874,049
Wood Working	633,986	777,722

Significant items in the above will be noted as carpentering, which continues to be one of the most important hand industries in Canada, more especially in interior work; wall paper, which as an outgrowth of the pulp industry, promises large development in connection with the growing vogue of that material in Canada; packing cases, largely an index to certain expanding lines of business.

It will be noted that a large percentage of these are in the nature of basic industries that have attained the dimensions of factory operations and output, while a number are of the incidental class carried on without the employment of a large amount of machinery. This may be said of all the miscellaneous industries. In the metal sub-division the following statistics may be noted:—

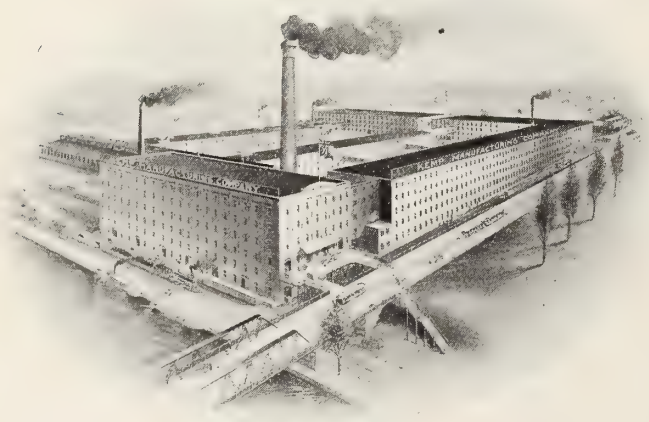
Metal Sundries.	Capital.	Value of Product'n.
Bicycle factories	$1,076,,700	$ 586,806
Bolts and nuts	301,000	379,700
Brass fittings	1,145,403	1,099,557
Cutlery, etc.	1,485,932	1,295,980
Hardware and saddlery	418,381	401,821
Iron and steel bridges	1,755,379	1,693,000
Plumbing supplies	5,056,458	7,375,451
Pumps and windmills	739,737	753,150
Printing presses	541,064	362,135
Safes and vaults	231,610	225,200
Saws and files	419,534	314,312
Scales	279,414	285,240
Screws	714,586	385,810
Wire and wire fencing	1,825,068	2,030,465

Stone, clay and glass also furnish a useful contingent, in which factory dimensions and extensive development have characterized especially brick-making, glass and precious stones.

	Capital.	Value of Product.
Bricks and tiles, etc	$4,210,244	$3,299,917
Glass works	1,522,692	995,401
Marble and stone	977,502	1,008,378
Show cases, etc.	200,500	265,535

Brick-making has advanced in Canada somewhat to the dignity enjoyed by ancient pottery. A brick is now no longer a four-pound chunk of red or white baked clay valued at $4 a thousand, as it used to be in the days of cheap building material. The comparative decadence of wood has brought about a corresponding evolution of brick which has now assumed mammoth proportions, though still unable to meet the rapidly growing demand in many places. Styles and qualities of brick have become legion. The finest finish consistent with durability is now obtained in Canadian brick, at, of course, a much greater expense to cover the increased cost of raw material, of improved machinery and of labor. The highest-priced bricks in Canada are sold at $17 per thousand, a price which in the days of the pottering old brick yard would have been prohibitive. Building has been on the boom in all large towns and cities and the brick factory has been the measure of it.

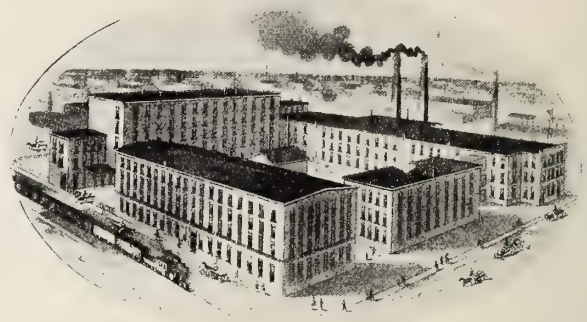
In the manufacture of glass extensive developments have taken place of late in western Ontario where in the lake country the finest of sand is easily obtainable. Large glass factories, calling



Kemp Manufacturing Co., Toronto.

for hundreds of skilled workers have been erected and are now in full operation at Wallaceburg and Kingsville.

In the preparation of precious stones a decisive but as yet somewhat prophetic advance has been made in eastern Ontario. Here within the past year have been discovered extensive deposits of sodolite, both granite and marble grade, and large deposits of both common white marble and statuary marble. Quarries have been started and in a short time the Princess Quarries Company,



Joseph Simpson Sons, Toronto.

called after the Princess of Wales, at whose instigation the deposits were exploited, will employ hundreds of workmen, polishing sodolite and quarrying statuary marble for exportation abroad.

Animal and Vegetable Sundries.

A useful and indigenous line of industries has been developed with animal matter as raw material. These embrace:—

	Capital.	Value of Output.
Brushes, etc.	$547,304	$952,658
Glue factories	60,043	47,627
Haircloth	99,176	109,679

Others, such as soap and candles, have been included in drugs and chemicals. In fibrous material the census indicates:

	Capital.	Value of Product'n.
Asbestos	$ 40,100	$ 68,945
Bag factories	915,663	1,114,243
Cordage, etc.	2,335,346	2,212,663
Flax mills	325,936	338,176
Tents, awnings and sails	269,727	448,249

In drinks and stimulants not included in brewing and distilling, may be included:—

	Capital.	Value of Products.
Coffee and spices	$1,044,272	$1,957,536
Wines	534,055	289,350
Aerated waters	905,741	806,532

Arms and ammunition, etc., comprise a list capitalized at $1,675,675, with a total value of products for 1901 of $1,054,000.

Other miscellaneous and scarcely classifiable industries are indicated by the census of 1901 as having a total invested capital of $9,770,828, a total production value for that year of $8,390,594, wages paid $1,182,866, hands employed 3,777. These represent an increase for the decade of over $9,000,000 in capital, nearly $8,000,000 in production, and nearly $1,000,000 in wages.

It is reported that the Canadian Fairbanks Co., Ltd., whose offices are now located in Montreal, have purchased a large site in West Toronto, upon which to erect their $1,000,000 plant. Besides making scales and trucks, the company will manufacture all the other specialties made in the dozen factories controlled by them in the United States.

Large additions are planned to the Pender Nail Works at St. John, N.B. At present the plant is somewhat congested, wire machines and nail machines being mixed up wherever space can be found for them. By the erection of new buildings these two branches of work will be separated, and more satisfactory results can be obtained.

Insurance Department

REPORT OF THE INSURANCE COMMITTEE TO THE EXECUTIVE COUNCIL.

During the month the Department has dealt with fifteen members whose aggregate insurance has amounted to $1,679,539. We have also adjusted two losses for members, one involving rather protracted service, but eventually adjusted to the mutual satisfaction of all concerned for a little over $22,000.

The Committee has requested the Finance Committee to appropriate the necessary funds for further clerical assistance and to make provision for opening a bank account for the purpose of depositing moneys for insurance premiums. It is confidently expected that the additional outlay for clerical assistance will be more than met by a corresponding increase in revenue, whilst the opening of the bank account will secure a regular and systematic payment to the Treasurer.

The Committee has adopted the following definite scale of charges, under which it is expected that the Department will continue to be more than self-sustaining:—

Examination of Policies.

Reporting on stability and reliability of companies..$2.00

Full examination of policies and reporting upon:— 20 cents per $1,000 of insurance carried.

(a) Adequacy of policy wordings,

(b) Burdensome or unreasonable conditions.

Inspections.

Members to pay travelling expenses,
and
25% of the actual amount of money saved on the first year's premium by reason of the visit;
or
Give a portion or the whole of the fire insurance business to the Insurance Department to place, in such amount as may be agreed upon at the time of the visit.

The travelling expenses will be borne by the Department, providing the net return from either of the above sources is not less than 60 cents per $1,000 of insurance carried on the premises inspected.

These charges are not cumulative; an inspection includes the examination of the policies and if necessary the re-drafting of the insurance schedules.

Loss Adjustments.

The fee charged by the Department for services in adjusting losses, will be commensurate with the extent of the work performed and the value of the services rendered, and whilst it is impossible to fix any definite charge, it will be made upon a reasonable basis, having due regard to all the circumstances.

It is the intention of the Committee to publish a pamphlet concerning the work of the Department, for distribution to the members, which will also include the scale of charges.

The Committee has again had before it the question of overhead wires, particularly in congested districts of cities and towns, and the Parliamentary Committee has been asked to look into the whole subject with a view to securing necessary legislation

P. H. Burton,
Chairman.

The Insurance Department was organized on February 1st, 1905, for the following specific objects:—

1. To suggest improvements in risks to insure reductions in rate.

2. To examine and report upon the fire insurance carried by members in respect to;
   (a) The reliability of the companies carrying the risks,
   (b) The printed or written conditions of the policies,
   (c) The policies covering all the property the assured desired to have protected.

3. To assist and facilitate the settlement of loss by fire.

These are the specific features in which it was thought we might at the outset be of great benefit to the members, leaving other plans to be matured during the succeeding months. It will be seen from the report of the Insurance Committee in the other column on this page, that after practically three months of experience, it has been found necessary, owing to the extensive utilization of our services, to lay down a definite scale of charges for any of the specific objects above recited. In the preparation of this scale of charges, the Committee has been actuated by the desire to make the Department self-sustaining and to provide funds for the unfolding of other plans and purposes which are being forced upon them by the rapid development of the work since organization. A careful perusal of the scale of charges will show that they are on a most reasonable basis and that as a matter of fact, on the conditions recited, our members can secure the full benefit of the Manager's services without entailing upon such members the slightest additional burden.

Without detailing our work with respect to any of the divisions above referred to, we merely record that since the first of February, we have dealt with the insurance of fifty-five of our members, whose aggregate insurance has been $4,172,930. We have also adjusted three losses for members, the details of which will be found in the pamphlet the Department will shortly publish, as referred to at the close of the report for last month.

The experience since organization fully warrants the following conclusions:—

1. That reduced fire insurance rates can be effectively and expeditiously obtained when improvements are made in the physical construction or protection of a risk.

2. That every dollar saved to the members is compensated for from the Insurance Company's standpoint, by greatly improved risks, and that our members not only save money, but have the added satisfaction of knowing that their premises are less susceptible to fire and less likely to be completely and totally destroyed.

3. That in the vast majority of cases, the policies omit to cover property that should have been protected. In no less than twenty-one instances out of the total number of 55 examined, entirely new forms of insurance have had to be prepared to remedy existing defects. In one loss adjusted by us, omissions in the wording of the policies entailed an actual loss upon the assured of over $2,000 which he was unable to recover from the insurance companies, although holding insurance equal to the total value of the stock on hand (including the items not covered by the policies) on the day of the fire.

4. That few of our members realize the onerous conditions inserted in the policies, and particularly the application of the Co-Insurance Clause, which is now in such general use.

An illustration very much to the point in regard to the latter feature, is found in the first loss we adjusted for one of our members, where by reason of the application of the Co-Insurance Clause a net loss of over $1,100 was sustained by the member, because of the non-compliance with the condition in question.

5. The further general conclusion is reached that money spent in taking proper advice in regard to fire insurance policies on any of the branches indicated, is money well spent.

E. P. Heaton,
Manager.

Transportation Department

RATE DECISION BY THE BOARD OF RAILWAY COMMISSIONERS.

An important decision has been announced by the Board of Railway Commissioners respecting freight rates on export live stock traffic.

Complaint was made by the Farmers' Association and the Dominion Cattle Dealers' Association of excessive rates charged for the transportation of cattle in carloads from stations in Ontario to Atlantic seaboard ports. The tariff rate to St. John, N. B., and Portland, Me., on shipments from all Ontario points on or south of the main line of the Grand Trunk and Canadian Pacific railways east of Windsor and Sarnia to Dorval, inclusive, was 25 cents per hundred pounds. From all stations north of the main line, notwithstanding that in many cases the length of haul is shorter, increased rates were charged, the maximum being 27 cents per hundred pounds.

The decision of the Board of Railway Commissioners requires the railways to protect a graduated scale of rates, commencing at 25 cents from Windsor and Sarnia and 26 cents from extreme branch line points on Lake Huron and Georgian Bay, and reducing by groups down to 19 cents from Dorval.

On live stock for export via Montreal, the board decided the rate from main line points west of Sarnia, London and St. Thomas should be 23½ cents per hundred pounds, and from maximum distance branch line stations, 25 cents per hundred pounds, reducing down to 15 cents from Toronto. The work of scaling the rates for the various other groups was left to the interested railways, who were required to submit figures for approval within ten days after receipt of the order. A protest was entered by the railways, more particularly against the rate of 15 cents from Toronto, which it was claimed was the result of a misunderstanding. The matter was re-heard at Toronto recently, and the board has since issued a supplementary order which provides rates to Montreal as follows:—

From stations west of St. Mary's, London and St. Thomas to Point Edward, Sarnia and Windsor, 23½ cents; from extreme branch line stations on Lake Huron and Georgian Bay, 24½ cents; from Toronto, 17 cents; the rates from intermediate groups are on a proportionate scale.

This decision by the Board of Railway Commissioners will be of interest to flour millers in our Association in view of the complaint now before the board in the matter of rates on grain products to Atlantic seaboard ports for export.

LIMITATION OF LIABILITY BY CARRIERS.

A controversy between the shippers and certain United States railways of considerable importance has closed with an agreement between the representatives of the carriers and the shippers, brought about largely through the efforts of the American Shippers' Association.

In 1903 the United States railways in what is known as the "official classification territory" agreed upon the enforcement of conditions contained in a uniform bill of lading, so called, which were designed to limit the liability of the carrier when transporting freight articles at the rates of carriage specified in their freight tariffs. In the event of shippers refusing to accept the conditions limiting the liability of the carrier, the bill of lading stipulated that the freight charges would be advanced 20 per cent., and the property transported at carrier's risk. Another condition, to which objection was made, required that all bills of lading should be marked "not negotiable."

The matter was taken up by various shippers' associations, and a wide-spread agitation against the new form resulted. The Illinois Manufacturers' Association organized what is now known as the American Shippers' Association, comprising shippers throughout the various States affected. Complaints were made to the Interstate Commerce Commission, and that body was requested to intervene on behalf of the shipping public. In the meantime, owing to the objections by shippers, the Uniform Bill of Lading Committee postponed the date for enforcement of the conditions of the uniform bill of lading. A hearing was held in Chicago by the Interstate Commerce Commission early in December, and a large amount of testimony from commercial organizations in support of the shippers' complaints was taken. An adjournment was made with the understanding that another hearing would be held at Washington, but owing to negotiations between shippers and railways this was further postponed. The result of these negotiations has been a signal victory for the shippers. At a conference in New York City in March an agreement was entered into by various representatives of the American Shippers' Association and the Uniform Bill of Lading Committee, representing the carriers, providing as follows:—

(1) The Uniform Bill of Lading Committee will cause to be withdrawn in regular form the bills of lading and rules of official classification No. 26 and the bills of lading and rules and regulations thereto provided for in the official classification No. 25 will remain in effect (a ruling circular which will be a part of official classification to be duly filed for this purpose).

(2) That petitioners will join with the respondent in causing the said proceedings pending before the Interstate Commerce Commission to be indefinitely postponed, the petitioners reserving the right to ask that the hearing be resumed if the committee hereinafter mentioned does not reach an agreement (reasonable notice to be given to the respondent in case of such application for resumption of hearing).

(3) That petitioner and the respondent shall on or before April 1st, 1905, respectively appoint five members each of a joint committee or conference consisting of ten members, which committee shall consider and arrive, if possible, at a just conclusion and settlement of this bill of lading matter. That the members of said committee, whether appointed by petitioner or respondent, shall be untrammelled by instruction and shall be free to reach a just conclusion of said matter according to their best judgment, and said committee of ten shall have power to add to its number by unanimous agreement.

In accordance with this agreement, the petitioner and respondent have appointed representatives, but the date of meeting has not yet been arranged.

In the event of a satisfactory form of bill of lading being agreed upon by the joint committee, it is proposed to have a bill presented at the next session of Congress legalizing the same for use by the railways throughout the country.

This matter is of special interest to shippers in Canada on account of the fact that the Canadian freight classification rule regarding the carriage of freight at owner's risk has received only temporary approval by the Board of Railway Commissioners and the railway traffic forms of contract and release of responsibility for freight carried at owner's risk have yet to be passed upon by the board.

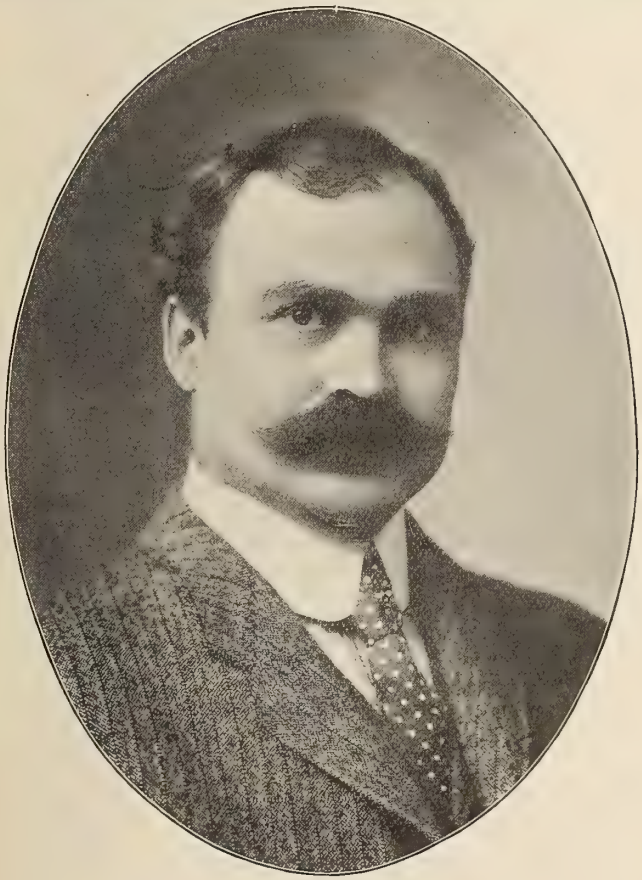
In October last an interim order was issued permitting the railways to continue the use of the present forms, but requiring them to appoint a committee of their legal and traffic officers to meet the board at Ottawa on a date to be subsequently named for the purpose of discussing their forms of contracts, both freight and passenger. The result of this meeting will no doubt be the adoption of uniform bill of lading and other traffic forms for use by Canadian railways.

Among the Industries

THE MANUFACTURERS OF CANADA.

Mr. William Kerr George, the President of the Canadian Manufacturers' Association and the official head of the 300 Canadians now touring the British Isles, is a fine type, both as regards his physique and his personal attainments, of the younger Canadian business man. He is in the six foot class, and tips the scales at over two hundred pounds. His quick step, his earnest and determined face bespeak activity and achievements. His every day life gives conclusive proof of the saying that "the busy man has the most time," and Mr. George's host of friends and acquaintances find him, with his bright cheerful disposition, always ready to take the most possible enjoyment out of every opportunity.

Mr. George's father, the Rev. James George, D.D., was born in Scotland and educated at Glasgow University, where he received his degree. His mother, Janet Kerr, also born in Scotland, was related to Sir James Ross, the Arctic explorer, and several of the Kerr family have held responsible positions in the British Diplomatic Service.



No. 14. Mr. William Kerr George.

Mr. George himself was born in Kingston, Ont., in 1861. His father was at that time acting principal of Queen's College (afterwards Queen's University), lecturing on Mental and Moral Philosophy and Logic. Mr. George was educated in the Kingston and Galt Collegiate Institutes. He matriculated from Galt in 1879, and entered Toronto University.

During his college days, and in fact for several years after, he was one of the best all around athletes in the Dominion. He played on the Toronto University Rugby team in their first match against McGill University. He helped to win the championship of Canada with the Toronto Lacrosse Association football team. He won places on the college baseball and cricket teams and on field day won both the University and open half-mile dashes. After leaving Toronto he was captain of the Souris Lacrosse team, the champions of Manitoba, and of the Calumet Lacrosse Club of Chicago, the champions of the United States.

Mr. George's business career began in 1882 in the great Canadian North-West. After a short stay in Winnipeg he became a partner in the firm of Hall, George & Co., Plum Creek, or what is now called Souris, Manitoba. This firm conducted a general business, and the nearest competitor was twenty-five miles away, in Brandon, a town at that time of 1,500 people. In 1887 Mr. George went to Chicago, and was there engaged in the manufacturing business.

In 1894 he returned to Toronto and organized the Standard Silver Company, Limited, of which company he is President and Managing Director. Ever since he started this business it has been successful, and its products, sterling and plated silverware, are known from the Atlantic to the Pacific. Mr. George is also Managing Director of the Simpson Hall Miller Co., Ltd.; Director of the Canada Corundum Co., Ltd.; Director, member of the Executive and chairman of the Manufacturers' section of the Canadian National Exhibition; First Vice-President of the National Club, Toronto; member of the Toronto Hunt Club, the Caledon Mountain Trout Club, and the Toronto Board of Trade.

Mr. George's active connection with the Canadian Manufacturers' Association dates from the reorganization of the Association in 1900, and continuously since that time he has held office and given his time and his best thought to advance the Association's interests. He was elected to the Executive Council in 1900; first Chairman of the Toronto Branch in 1901; Ontario Vice-President, 1901-1902; First Vice-President, 1903; and President for 1904-05. The Association under his guidance has had a most successful year, and the excursion to Great Britain is largely a result of his enthusiasm and earnest desire for a closer touch and a better understanding between the people of Great Britain and Canada.

In politics he is a Liberal, but he never lets party politics interfere in any way with his broad view of public questions, and in all matters he considers "Canada" before politics. In the Dominion election of 1904, and in the Provincial election, 1905, he was offered Liberal nominations, but his public work in connection with the Manufacturers' Association and other organizations and his private interests prevented his acceptance.

In 1892 Mr. George was married to Miss Rachel H. Lee, a daughter of one of Toronto's oldest families. Her accomplishments, her vivacity, and above all her sweetness as an entertainer in her own beautiful home in Rosedale, have made her a host of friends, and in Mr. George's business and in his public duties he finds her an able assistant.

No matter how busy or how many calls to work, there is nothing Mr. George will let interfere with his home life, and he is never quite so happy as when spending the afternoon or evening with his wife and three little daughters.

Rhodes, Curry & Co. are considerably enlarging their plant used for the erection of passenger cars.

A. C. Leslie & Co., the Canadian agents for John Lysaght, Ltd., are now located in their new building at 560 St. Paul St., Montreal.

The Taylor-Forbes Co., Ltd., Guelph, have completed their new foundry building, and will at once take up the manufacture of radiators.

The Mason & Risch Piano Co., Toronto, will enlarge their factory by the addition of two more stories. They have also leased another nearby factory to enable them to cope with their increasing business.

A permit has been granted to the Massey-Harris Company, Toronto, to erect an addition to their works to cost $125,000. The building will be 404 x 143 feet, and will have four stories and a basement.

R. J. Reid & Co., bookbinders, Winnipeg, have recently branched out into the making of paper boxes. Their plant is said to be one of the most up-to-date in Western Canada. They have 15 machines for cutting and shaping boxes, and 20 hands are employed in the work.

According to *Canadian Machinery*, something over 200 locomotives will be turned out of the different Canadian plants this year, which will exceed the record of any previous year by at least 60. This speaks well for the growth in tonnage hauled by Canadian railways.

The American Radiator Company of Chicago, the largest concern of the kind in the United States, and known as the radiator trust, has purchased the plant of the Cockshutt Plow Co., Brantford. The premises will be considerably enlarged, and the manufacture of hot water boilers and radiators will be undertaken on an extensive scale. The company has a capital of $100,000,000.

A company of Prince Albert capitalists are seeking incorporation under the name of the Saskatchewan Produce Company. They intend to develop the extensive fish industries to the north of the city, and will proceed at once with the construction of a freezer, to be located in Prince Albert. Some fifty men will be employed when the industry is in full swing.

The Galt Knitting Co. has begun work on a new four-story brick factory, 120 x 135 feet, which it is expected will be completed some time this fall. It will be equipped with every modern appliance for the knitting of underwear, including a number of new machines for handling some specialties which the company has in view.

The Belleville Cement Works, the first concern in Canada to make cement from limestone, have completed their plant, and are now in active operation. Their power plant is also unique, in that it includes the first steam turbine operating for industrial purposes in the country. The capacity of the works is 1,000 barrels per day, which it is said may be trebled at small expense.

Prospectuses have been issued by the Western Canada Pulp and Paper Co., inviting public subscription of £300,000 six per cent. stock at par. Their pulp limits are said to consist of some 163,000 acres at the mouth of Powell River, on the seaboard of British Columbia. Spicer Brothers, of London, England, will act as distributing agents for the company, and have already contracted for the absolute sale of the greater part of the output for the first five years.

Tarred building paper is now being made by the Sault Ste. Marie Pulp and Paper Co., under new processes patented by Mr. A. E. Millington, superintendent of the pulp mill. This material is in much demand throughout New Ontario and the North-West, where dwellings and barns are springing up as fast as labor can be found to build them. The capacity of the Sault plant, which is to be kept running night and day, is 20 tons every 24 hours.

The Montreal capitalists who are exploiting the Kakabeka Falls project, near Port Arthur, have completed their preliminary surveys and the plans are now well in hand. Work on the canal will be commenced very shortly, the intention being to deliver power to Fort William and Port Arthur by May 1st, 1906. The prospective establishment of a number of large industries at these two towns has followed as a direct result of the decision of the company to push the work through to an early completion.

Work has been commenced on the $300,000 power dam at Fort Frances, Ont. The machinery is now all on the ground, and when everything is in full swing the contractors expect to have 300 men employed.

The big merger of cotton interests recently announced, which led to the formation of the Dominion Textile Company, is said to have gained new strength by the acquisition of the Montreal Cotton Company, the biggest of the companies which at first remained outside the combine.

A Montreal firm proposes to erect a large factory at Haileybury, in Northern Ontario, for the manufacture of wooden and pulp articles. The concern is to employ 500 to 600 hands, and expend $500,000, of which $200,000 will be the cost of machinery. Negotiations are now being carried on with the Ontario Government for a timber concession.

Some confusion has been created in the minds of the buyers of drawn steel in Canada by the fact that two companies, the Canadian Drawn Steel Co., and the Union Drawn Steel Co., are both starting to manufacture in Hamilton. The former is a purely Canadian concern, while the latter is a branch of the United States firm of the same name.

The ratepayers of Wingham, Ont., will shortly vote on a by-law to fix the assessment of the Canada Furniture Manufacturers' property in that town at $25,000 for ten years, in consideration of which the company will erect, in addition to the union factory, a three-story building, 64 x 70 feet, with basement, and double the number of hands employed.

There seem to be good prospects that a large tannery will shortly be added to Winnipeg's rapidly growing list of industries. Two gentlemen of wide experience in the business, Messrs. Gordeau and Robbins, have the matter in hand, and a suitable site has already been selected. The large quantities of raw hides obtainable in Winnipeg is mentioned as one of the economic factors in the undertaking.

The Tip Top Copper Mine, near Port Arthur, Ont., intermittently worked for a number of years, has been purchased by Mackenzie & Mann, who, it is understood, will develop the property systematically. If expectations are realized, a copper smelter will likely be established at Port Arthur, to be operated in connection with the blast furnaces now in process of erection by the same company.

A new box factory is being started in Toronto by the Consumers' Box and Lumber Co., composed of Mr. J. B. Miller as President; Mr. W. B. Tindall, Vice-President; Mr. Frank Sully, General Manager; and Mr. John McClelland, Secretary-Treasurer. The plant will be thoroughly equipped with the most modern box-making machinery, and as the men at the head of it are all practical and experienced men, its chances for successful operation are very bright. It will have one of the largest factory floors in the city. July 1st is the date set for the commencement of business.

The proposed incorporation of the Commercial Rubber Company will mean an amalgamation of the principal rubber manufacturing interests of the Dominion, including the Canadian Rubber Company, of Montreal; the Granby Rubber Company, of Granby, Quebec; the Gutta Percha and Rubber Mfg. Company, Toronto, and the Maple Leaf Rubber Company, Port Dalhousie. The new concern would require a capitalization of about $10,000,000, and would control 90 per cent. of the rubber trade of Canada.

Canada's first tin plate manufacturing plant is shortly to be established at Morrisburg, Ont. New York capitalists, headed by Messrs. J. W. Allison and G. H. Meldrum, have taken over the Canadian Tin Plate and Sheet Metal Company organized some time ago, and a new company has been formed, capitalized at $1,500,000. The steel works at Sydney will supply the necessary steel in the form of bars, which will be rolled and coated with tin, after the process now in vogue in Wales and the United States.

LITERATURE FOR BUSY BUSINESS MEN.

Books for Review should be sent to the Editor, Industrial Canada, Toronto.

Protection in Canada and Australasia, by C. H. Chomley, B.A., LL.B., member of the Council of the Australian Free Trade and Liberal Association. King & Son, London, 1904, pp. XIII, 195, 3s. 6d. net.

The early tariff history of Canada, or as we ought to say, of British North America, is a chapter in the mercantile system of the Motherland. It includes colonial restrictions and preferences, and its results have been subject of debate for a long time. The question of the influence of colonial preferences we shall reserve for later mention, the 15% Galt Tariff of 1859 is the first distinctly protective Canadian tariff. It concerned only Upper and Lower Canada. At Confederation it was lowered to meet the demands of the Maritime Provinces. In 1871, the average tariff rate rose to 15% and in 1874 to 17½%. The latter rate was the outcome of trade depression and a falling off of revenues. Then came the inauguration of the N.P. in 1898, with an average of 20%. A great many minor changes were made down to 1893, when the 17½% average was reverted to. The further reductions and reforms of 1896 are too fresh in popular memory to need mention.

The preferential tariff policy dates from 1897, but in a certain sense it was forecasted five years before that in an amendment of the then Opposition in the House of Commons.

Sir Richard Cartwright has said, from one point of view it was a flank attack upon protection. In 1898 it became a purely Imperial preference. In 1900 the preference was increased from one-fourth to one-third.

The preference is a substantial one, in that the Canadian tariff has always been a moderate one, approximately half that of the United States. Its protective qualities have been further impaired by the alleged practice—which manufacturers declare is too often followed to the prejudice of local industry—of our railways quoting lower freight rates on imports than on exports.

It cannot be maintained that the protective policy was introduced too soon. The unbiased student will find that circumstances forced the issue; that it was a question of commercial and political independence of the United States. What has given color to criticism of our protective policy is the fact that industry on a large scale had necessarily to await improved transportation, the opening up of the back country and the exploration of the great natural resources of the Dominion. No country in modern times has had such a peculiarly difficult road to traverse when the influence of the United States—with similar language, and more advanced industries—is recalled. The only possible exceptions are some of the Spanish Colonies of South America.

The author of the present volume overlooks these local conditions and applies the conclusions of a ready-made, narrow, free-trade dogma to a country he should know more about before he tenders advice. It is too often asserted that political economy favors free-trade. As Professor Sidgwick points out, it all depends on the breadth of view, and he himself vigorously maintains that protection is theoretically valid. The book before us, however, in spite of its immaturity, is useful enough to read, and have at one's hand for reference. It is the only attempt at a history of the Canadian tariff, other than the short account by R. J. McLean, in the University of Toronto Studies in Political Science, and the articles in Hopkins' Canada: an Encyclopaedia of the Country.

One or two quotations may be given: "There was no issue," Sir William Mulock declared, "of Free Trade against Protection in Canada. The only question was between a high prohibitory tariff and a moderate just tariff." . . . "In the face of this apologetic attitude . . . it would be rash to prophesy that the Canadian tariff will not be raised much higher in the near future." "It is safe to say that (Canadian Manufacturers) would not long tolerate a preference which gave any substantial portion of trade now enjoyed by American or other foreign manufacturers to those of the United Kingdom." "It is quite unlikely that the present duties of Canada will be reduced or even kept at their present level, unless and until the Free Trade party fights a campaign to replace the revenue lost at the Customs by a direct tax upon income and the unimproved value of land."

Problems of the Panama Canal, by Brig.-Gen. Henry L. Abbot, Consulting Engineer, New Panama Canal Company. Macmillan, New York, 1905, (Morang, Toronto), pp. XI. 248, $1.50 net.

Canadians are directly interested in the Panama Canal project—one of the greatest of its kind. They will, perhaps, find in it an efficient regulator of transcontinental railway rates. As owners of the most extensive canal system of any country, they ought also to feel interested in the problems of its construction. Pity that Canada was not sufficiently developed to warrant Great Britain declining to abrogate the Clayton Bulwer Treaty, and to help her in this way secure joint ownership and control.

The canal is estimated to cost one hundred million dollars, and is to be completed in about ten years. The Isthmian Canal Commission came to a decision favorable to the Panama route in January, 1902; but not until the treaty with the new Republic in November, 1903, did the United States secure all the needful rights. The various steps from De Lessep's dream of a sea-level project (which would have cost over two hundred millions, and taken a quarter of a century to execute) to the present are briefly traced. The body of the book, however, is taken up with the most authoritative presentation to date of the physical and engineering difficulties to be encountered.

War of the Classes, by Jack London. Macmillan, New York, 1905, (Morang, Toronto), pp. XVII. 278. $1.50, net.

We are assured there is a war of the Classes now being waged. Boiled down it is the struggle to secure more wages. The effort, or struggle, or war, call it as we may, is part and parcel of the present wages system. Unionists are becoming conscious of their class. To be a member of the militia is to be a traitor to the union. All through the unions socialism filters. In the United States the National Association of Manufacturers and the National Economic League represent opposing class organizations, and they must needs be alert.

A scab is one who gives more value for the same price than another, be it the woman stenographer or the child who goes into the mill. Ours is a tooth-and-nail society. In so far as the British workman "goes easy" the competing American workman scabs on him. The organization of labour is one of the chief acknowledged factors in the retrogression of British trade.

Our author is radical. He says bold things boldly. But his observations make one think again. Buckle, in his History of Civilization, remarks that there are three great causes of European progress—the invention of gunpowder, the discoveries of political economy, and the application of steam to travel. The present industrial unrest and progress in spite of all, should serve to remind us "the while" of the value of a broad, careful study of economic laws, particularly by business men.

The Diamond Flint Glass Co. are about to establish a branch factory in Hamilton, where from 100 to 150 men will be employed. Some old buildings are being remodelled to meet their requirements, and everything is to be ready to start work before the end of the year.

Labor Column

A YEAR OF ORGANIZED LABOR IN THE UNITED STATES.*

The Annihilation of Individualism and the Development of Socialistic Ideas are the Deplorable Features.

Organized labor was less strenuous in the past year in its socialistic endeavors than in the several years immediately preceding. There were a number of notable strikes, among them being the Fall River cotton mill strike, the so-called "beef strike," the strike of the employees of the Interborough Rapid Transit Company of New York, and the present sympathetic strike of the teamsters in Chicago. Smaller strikes were quite numerous, but on the whole these efforts to fix arbitrary wages and hours by demonstrations of physical power were less in number and less offensive to a proper regard for law and order. This is not saying that the rights of individuals were not at times ruthlessly trampled upon, or that the laws were not occasionally flagrantly ignored. But there was unquestionably less cause for complaint than for several years.

I am sure that all the friends of good government and of labor itself will gladly give organized labor full credit for this improvement in its record. It cannot be expected that complete reformation can be worked in the methods and theories of organized labor in a few months, or even, perhaps, in a few years, but if steady progress can be made toward such reformation, not only are all the people to be congratulated, but particularly that portion of the people belonging to organized labor.

The strikes of the year were almost uniformly failures from the union standpoint. Thousands of strikers suffered the loss of employment because of the hiring of independent labor to take their places, and the unions themselves in many instances lost what control they previously had over the industries involved. The open shop was the outcome of most of these struggles. In fact, the open shop movement made extraordinary progress during the year. At a low estimate fully 1,500 concerns employing labor changed from the closed to the open shop. The movement was greatly assisted by several notable court decisions in which it was held that closed shop agreements were illegal and void. The courts have never, to my knowledge, upheld the closed shop, and I do not think they ever will. They will not do so, at any rate, until the Constitution of the United States is radically changed.

Eight-Hour and Anti-Injunction Bills.

The efforts of organized labor to secure the passage of laws abridging individual freedom of action met with complete failure at the national capital during the recent session of Congress.

Besides being unsuccessful at Washington, organized labor failed in a number of its attempts during the winter to secure socialistic laws from various legislatures that were in session. This was due to the aroused activity of manufacturers and employers in these States, and while I cannot go into detail on this work, yet it is well enough to say that much progress was made in this direction, and that it is my belief that the time is fast approaching when those who believe in the perpetuation of the individualistic character of our institutions will be able to use their power effectively in respect to State as well as national legislation.

Reformation of Organized Labor.

Standing for certain ideas and ends, organized labor might become of much benefit to labor. With its present objects and policies, however, there is no question that it works immeasurably more harm to the best interests of labor than it accomplishes good. It preaches disrespect for law, inveighs against the militia and the courts, wages warfare on industry, denies industrial training to the youth, limits individual output and conspires in various ways to injure or punish those who will not obey its rule. But, above all, it seeks to overthrow individual initiative, the one thing to which more than to any other is to be attributed our high material development. It is thoroughly saturated with the socialistic creed that the individual has no rights which man in a collective capacity need recognize.

Perhaps the day is gradually coming when organized labor will realize the fatal errors it is making. Current events appear, in fact, to be forcing its reformation. Sooner or later it must see that it cannot make headway against the individualistic character of our institutions. Let it abandon its closed shop warfare and recognize that the workman cannot be converted into an automaton to do its bidding. Let it encourage self-reliance and self-responsibility in the workman, granting him the right to work where and for what he pleases. Let it seek to uplift labor by fostering its education and its proficiency and assisting it in securing employment by legitimate methods. Let it become the servant and not a tyrant over labor, and it will rehabilitate itself in the eyes of all loyal American people.

* Extracts from the Presidential Address delivered by D. M. Parry, of Indianapolis, Ind., at the tenth annual convention of the National Association of Manufacturers, Atlanta, Ga., May 16, 1905.

ARE UNION FUNDS ATTACHABLE?

The Master in Chambers Says No, But the Case Will Be Appealed.

According to the Master in Chambers, Osgoode Hall, Toronto, the money which a labor union has on deposit in a savings bank cannot be attached to satisfy a legal judgment. This is the ruling delivered on the motion made by the Metallic Roofing Co. against Local Union No. 3, Sheet Metal Workers, to attach moneys on deposit in the Dominion Bank to the credit of the defendants in satisfaction of costs recovered by the plaintiff company.

The Master admitted the point to be a new one, but held that the local union was not a legal entity, and consequently could not hold property. Therefore the money in the Dominion Bank was not the property of the union, but rather a trust fund belonging to those who from time to time might be eligible to share in it through sickness or death. The money paid into the fund ceased at once to be the property of the contributors. They had no longer any individual power to deal with it. It had passed out of their control and was therefore non-assignable by them. Nor could it be attached to satisfy their debts.

Notwithstanding the consideration displayed in this judgment for those dependent upon members of a labor union, the fact remains that funds set apart for this worthy object are frequently appropriated by the very men out of whose control they are supposed to have passed, for the purpose of prosecuting strikes. It has always been the policy of the unions to assume an air of righteous indignation when any attempt is made to attach these trust funds for the purpose of satisfying a claim, and to champion the cause of the widow and the orphan, but their misuse of them, on other occasions, when an opportunity offers of crippling their employers, exposes the insincerity of their motives.

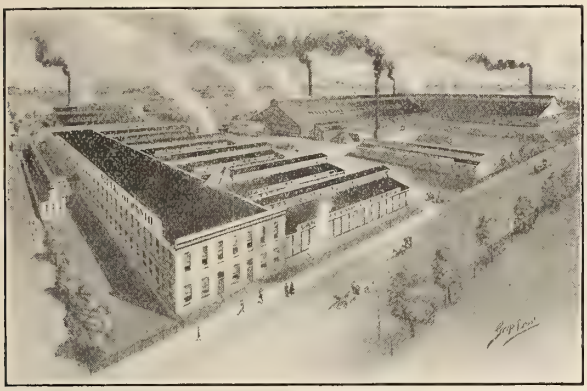
As we go to press the announcement reaches us that the Master's decision has been reversed by Mr. Justice Anglin. The case will probably be carried by the union to the Court of Appeal.

Foreign Trade News

This Department is published in connection with the work of The Commercial Intelligence Committee, who will be glad to receive from reliable sources contributions relating in any way to Export Trade.

Jamaica's Boot and Shoe Trade.

Referring to the boot and shoe trade of Jamaica, a correspondent writes under date May 12th as follows:—"Jamaica demands something that is light and smart. My negroes, both men and women, the most of whom go six days without boots, must have a smart, low-priced boot for Sunday or after work, one to sell at 6, 8 or 10s. a pair. Of course the best makes are sold in the towns and cities. What I saw a long time since from Canada were too heavy, not smart enough for the majority of the people. The Jamaica boot and shoe trade is worth to the United States almost as much as what their exports to Great Britain amount to. This may surprise some Canadian manufacturers, and with the above you may help them.



McKinnon Dash and Metal Works Co., Ltd., St. Catharines.

"United States prints (printed muslins they call them) too, are largely in evidence in Kingston now, and calicoes also. It is Canada's turn in these goods to go in, John Bull like, and beat the United States in the above articles, as she has done in other articles of commerce."

An International Postage Stamp.

The proposition made recently by the Chamber of Commerce at Hamburg that the Governments forming the International Postal Union should agree upon and issue a series of international stamps good for foreign postage in any country belonging to that organization merits the favorable attention of postal authorities and business men the world over. The practical difficulties in the way of carrying out such a plan do not appear to be serious, nor is it probable that action by Congresses, Parliaments or other legislative bodies will be required to put it into operation. A mutual agreement between the different post office departments will suffice, it is believed, to at least give such a plan a trial. The advantages of an international stamp to business men engaged in foreign trade are so numerous and so great as hardly to require enumeration. As a medium for prepaying postage for reply in cases where it is undesirable to request the recipient of a letter to pay for such reply himself, as a means of making trifling remittances, and in a number of other ways, such a stamp would be useful. Every business man in any part of the world, who feels that this plan will benefit him, should induce his local Chamber of Commerce or Board of Trade to urge its endorsement upon the post office officials of his country.—*Dun's Review.*

Wire Fencing.

There is at the present time an excellent demand in Uruguay for wire fencing. Owing to the revolution in several of the provinces many fences were destroyed. The cheapest class of goods is that which has the readiest sale here. Germany holds the first place in this trade, the United Kingdom second, and the United States third.—*Export, Berlin.*

New Australian Tariff.

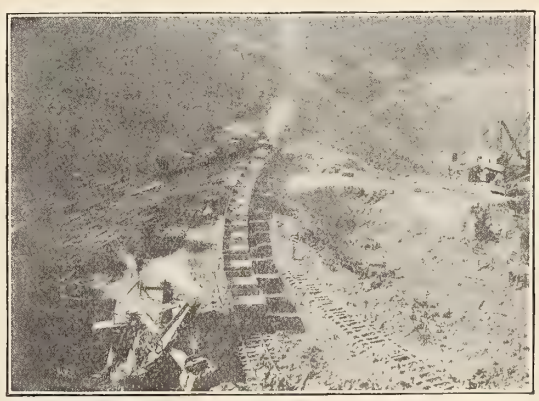
Within the next twelve months some very important changes are expected in the Australian customs tariff, and it is quite probable that a preferential arrangement will be a feature. Feeling in Australia is becoming more and more pronounced in favor of such action, but there are grave differences of opinion as to how a preference as granted by Canada, New Zealand and South Africa can be arranged without serious results to established industries. For instance, the woollen industry in Australia is struggling for an existence in much the same manner as the Canadian industry.

Just now there is a tariff commission investigating the conditions and taking evidence in the principal Australian cities. This investigation will not be concluded until the fall, but already the evidence presented leads to the conclusion that any preference that may be decided upon will not be in the nature of a percentage reduction of the general tariff, but rather will be made effective by selecting certain articles and increasing the duty on them against countries not to be favored by a preference, and leaving it as to-day against those portions of the Empire which it is decided to favor.

United States' Cement Industry, 1904.

The United States Geological Survey has issued the following statement regarding the production of hydraulic cement in the United States for the calendar year 1904. This statement is preliminary to the annual report on the production of cement which is now in preparation.

The total production of Portland, natural-rock, and slag or Puzzolan cements in 1904 was 31,675,257 barrels, valued at $26,031,920. These figures show a marked falling off in price when compared with prices for 1903. The production for 1903 amounted to 29,899,140 barrels of hydraulic cement, valued at $31,931,341. In the production for 1904 there is a gain of 1,776,177 barrels over that for 1903, but in the value of the cement produced there is a loss of $5,899,421.

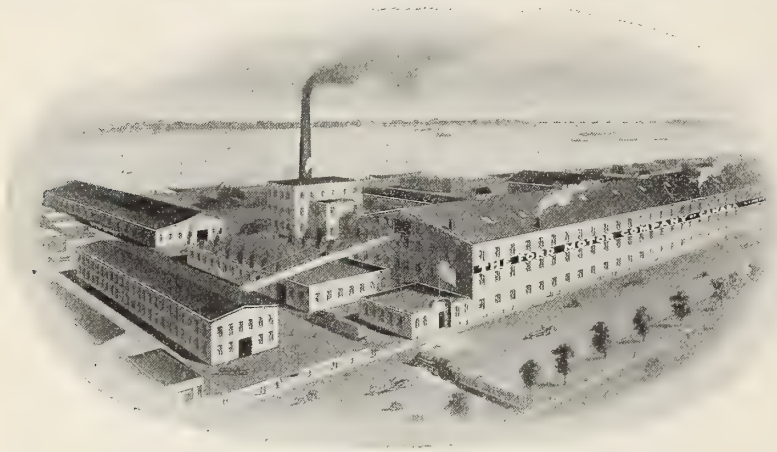


Helen Mine, Michipicoten Harbor, Ont.

Of the total amount of cement manufactured in the United States in 1904, 26,505,881 barrels were Portland cement, valued at $23,355,119; 4,866,331 barrels were natural-rock cement, worth $2,450,150, and 305,045 barrels were slag or Puzzolan cement, with a value of $226,651.—*The Western Builder.*

European Bicycle Trade.

The Antwerp correspondent of *Commercial Intelligence*, remarking on the disappearance of the English-made bicycle from



THE FORD MOTOR CO., LTD., WALKERVILLE.

the Belgian market, states that the American-built machine has literally crowded the Britisher out of the Continental markets. One dealer in a very large way of business tells him that the English machine is too expensively built for present requirements. An enthusiastic cyclist nowadays changes his wheel about every two years, and this has completely thrown the high-priced wheel out of the market. Even cyclists in the wealthy classes refuse to pay more than from ten to twelve pounds. A second-hand machine to-day, no matter how well known the make or how finely built, fetches no more than from two to four pounds.

French Market for Preserved Meats.

The market for preserved meats in France will probably be a growing one with a steady demand for such commodities. Animals raised for butchering are barely sufficient to supply the demand for fresh meats, the supply of canned or salted meats practically all coming from foreign countries. Smoked hams, shoulders, bacon, salt pork and lard are in good demand. There seems to be quite a demand for shoats, weighing from 50 to 100 pounds, dressed, smoked, and uncut; these are sold in large quantities at Christmas time and in the spring before and after the Lenten season. They are considered great delicacies and bring high prices. Corned beef and pork and canned meats, such as may be used for army supplies, find a ready sale. The demand for preserved meats that may be used by the working classes and farmers is growing. It is noticeable that the diet of the working people consists more and more of meat, especially at the noon meal; this change is pronounced in large cities where the people have left the country districts to work in factories.—*Chamber of Commerce Journal.*

Market for Wood in France.

Although France is giving great attention to the reforestation of the land, it will never, says the United States Commercial Agent at Limoges, be able to meet the domestic demand for wood. Pine wood in large quantities is imported from Scandinavia, but the prices are increasing, as the wood is brought from longer distances than formerly. Hard woods, especially oak, in almost every variety; spokes, turned and unturned; fellies, adapted for heavy and large wagons and carts, and hubs, generally made of elm or arbor vitæ, are in good demand. All kinds of wood suitable for building houses, carriages, railroad cars, etc., will find a good market in France, if the prices asked are not higher than at present. There is a continual demand for staves of all kinds; the large or tun size is preferred, as it gives the French cooper a chance to economize wood and make small casks from what is left over. Uncut staves can pass the customs at a lower duty than those cut and finished; the sale of the debris for kindling wood will almost pay for the preparation of the finished articles.

Trade Items from Australia.

Through capable representation, indents have recently been secured in Adelaide for the following lines of Canadian manufactures:—Screen doors and blinds, sanitary woodware, chairs, trucks, wash boards, wove wire, axe handles and sundries. The arrival of new samples will bring further business in Adelaide, although, generally speaking, trade is rather quiet in South Australia.

It may interest Canadian paper manufacturers to know that a very determined effort is now being made by Norwegian and German makers to secure newspaper contracts throughout Australia. Small trial shipments — said to be superior in quality to any paper previously produced in Europe—are coming forward to the principal paper offices in Melbourne, etc., and if the quality is satisfactory the prices will meet present Canadian and United States competition.—*Canadian Commercial Agent, Melbourne.*

South Africa Wants Pumping machinery.

Owing to the continued dry seasons in South Africa, which have caused the destruction of large droves of cattle, a demand for pumps and windmills has sprung up. The sinking of wells has become a pronounced necessity. Even the Government boring machines have been called into use to supply cattle with the necessary quantity of water to sustain life. Two kinds of motors are saleable, a light one for pumping water for cattle, and a heavier one to pump for irrigation purposes. Of the first kind there is a great variety on the market at Cape Town. The main points considered in purchasing such motors are lightness combined with great capacity, facility of removal from one place to another, and ability to be set in motion by the lightest breeze. Windmills answering these conditions are at the present time very scarce.—*United States Consular Report.*

Canadian Printed Cottons.

It is generally admitted by local wholesale dry goods importers that the Canadian designs of cotton prints are superior to the Manchester patterns, and, for that reason, are preferred by the Australian retail trade. The demand for cheap lines of printed cottons, owing to climatic reasons, is a very large one, and is certainly worth more care than it is now receiving at the hands of Canadian makers. Stocks of these goods in Australia are now comparatively limited, but heavy orders will shortly be placed. With a much reduced cost of the cotton staple, it is now an opportune time to further develop this trade. It is not an uncommon transaction for an Australian wholesale house to place an order for some thirty to forty thousand pieces of one line if the assortment of patterns and prices is right.

In order to secure large orders for Canadian printed cottons, it is absolutely necessary for the manufacturers to appoint an Australian agent to act for them. Samples of the various qualities and designs for the next season should be forwarded at once, or otherwise the bulk of the indents will be placed. On account of fluctuations in the cost of raw cotton, and through the fact that the margin of profit on these goods is a very fine one, a complete cable code should be arranged for the various lines so that the latest values can be obtained by "cable" at a minimum expenditure. Payment can be made in New York, or preferably in London, against shipping documents.—*Canadian Commercial Agent, Melbourne.*

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

373 **Agencies—Glasgow**—A correspondent in **Glasgow, Scotland,** is desirous of being appointed the representative of Canadian shippers.

374 **Havana**—A company recently organized as importing, exporting and commission agents in **Havana, Cuba,** ask to be put in touch with Canadian shippers. The head of this firm has had a long experience with an old established firm in Havana, and is now taking over the export and import department of the same.

375 **Appliances (Electrical), Water Power Machinery, Machine Tools, Portland Cement**—The principal of an engineering college in **Calcutta, India,** is desirous of communicating with Canadian manufacturers in the above classes of goods. He wishes to keep posted regarding the same as he may be in a position to direct business from time to time.

376 **Boxes, Butter**—A correspondent of the Association in **Melbourne, Australia,** desires to procure butter boxes in Canada. The boxes are to be 12 inches square inside, ends ⅝ inch



W. E. Sanford Mfg. Co., Ltd., Hamilton.

thick when dressed, sides, top and bottom ½ inch thick when dressed, all in single pieces, and the whole when nailed together not to weigh more than 10½ pounds.

377 **Cheese, Hams and Bacon**—A firm in **Gibraltar** who have been purchasing the above articles from English houses desire direct communication with Canadian shippers.

378 **Doors**—A **North of England** firm has asked to be placed in touch with Canadian manufacturers exporting pine doors, etc.

379 **Dowels, Chair Legs, Cornice Poles, Brush Backs**—A correspondent in **London, England,** established for five years as a wholesale agent for turned woodwork desires to communicate with firms in a position to supply chair legs, 1-inch, 2-inch and 3-inch; dowels, ½-inch; broom handles, 51-inch x 1⅛-inch; cornice poles and cornice pole ends; and wood backs, bored ready for brushes. He asks for quotations delivered England, does business in a large way on a commission basis and forwards a reference.

380 **Hides and Skins**—A correspondent in **India** writes that he is in a position to supply buffalo and cow hides and goat and sheep skins and gives prices f.o.b. Calcutta for the same.

381 **Lamps, Electric Light Fittings, etc.**—A **London, England,** correspondent is desirous of representing Canadian manufacturers of the above articles. He states he is in a position to handle a large business.

382 **Leather**—A manufacturers' export sales agent in **New York** requests correspondence from manufacturers of fancy leather, bridle, saddle, strap and collar stock. These goods are for export to the West Indies and Spain.

383 **Machinery and Appliances, Electrical**—An import firm in **London, England,** who are on the Admiralty, War Office and India Office lists, and are engineers and machine tool makers, are desirous of obtaining sole agencies for the British Isles for specialties in machines and appliances for the use of engineers. They forward partial list of customers, among which are noted some of the best-known firms in England and the colonies.

384 **Metal Scrap**—A **Birmingham** correspondent is prepared to buy all classes of old metal, such as brass or copper tubes, heavy scrap brass, copper or gun metal borings, gun metal scrap, etc.

385 **Paper, News**—A correspondent in **Shantung, China,** writes asking for prices and samples of Canadian newspaper. He states that the newspapers in North China have recently had difficulty in securing a sufficient supply and that there is an increasing demand for foreign paper of all kinds and it brings a good price. He gives the names of some of the more important Chinese papers, and asks for quotations f.o.b. Shanghai or Hong Kong.

386 **Produce, Textiles, Hardware, Rubber Goods, Grain and Hay, Fish, Tobacco, Cigars, Spirits, Leather Goods, Biscuits and Confectionery, Paper, Etc.**—A wholesale manufacturers' representative, established 1889 in **London, England,** desires to represent Canadian shippers of the above and other lines on a commission basis. He asks for catalogues and price lists, states that he has a good connection established with representatives in South Wales, Scotland and Ireland, and also acts as buying agent for an import society. He forwards a reference.

387 **Proprietary Articles**—An agent with a connection in the grocery trade is desirous of representing a Canadian firm exporting proprietary articles.

388 **Provisions and Groceries**—A salesman with experience in the provision and grocery trades is prepared to represent Canadian exporters on commission or otherwise if desired.

389 **Pulp, Fruit**—Inquiry is made by a **London** firm respecting supplies of raspberry and other fruit pulps from Canada.

390 **Starch, White Oak Staves, Fresh and Dried Fruits**—A correspondent in **Vlaardingen, Holland,** established in the wholesale business in 1865, desires to purchase or receive on consignment the above articles. References are forwarded. Payments to be arranged against drafts.

391 **Underwear**—A company in **London, England,** carrying on the business of colonial agents, desires to purchase heavy imitation wool men's underwear for New Zealand clients. They ask for samples and price lists.

392 **Wines, Spirits, Whisky, Malt, Flour, Biscuits, Cheese, Beans, Corn, Meats, Canned Goods**—A general merchant and import and export commission agent in **Surinam, South America,** asks to be put in direct communication with manufacturers in the above lines who desire to appoint an agent in his district.

Clare Brothers & Co., of Preston, Ont., are making large additions to their plant, including a moulding shop, a three-story pattern storage warehouse and other buildings.

WESTERN COLLECTIONS.

(From *The Commercial*, Winnipeg.)

We understand that there is considerable grumbling being done by Eastern wholesale merchants and manufacturers at the state of their accounts with retail merchants in the West. They find collections very slow, and a number of accounts look shaky. We beg any of our readers who may be among the number of these grumblers to take a good square look at the facts.

In the first place, it has been ever thus with the Easterner when Western accounts are concerned. Since ever this became a settled country the experience has been that Eastern houses were ready to rush in and fill the country full of goods when times were good, and then if they did not realize all their expectations they grumbled and said that the West was no good. Connections maintained upon that plan are bound to be unsatisfactory. It would be better for those houses which only want to deal in sure things to hunt for them nearer home. The experiences of the past few years have only served to deepen the impression in the West that the East has no abiding faith in its greatness nor knowledge of the resources upon which this greatness is based. Eastern wholesale men and manufacturers are still only to ready to cry out against the country when business does not turn out quite as they anticipated.

And it is in this fact that the reason for the more satisfactory condition of Winnipeg accounts is to be found. The Winnipeg jobber is on the spot. He knows the country and he knows the people who are doing business in it. He is careful to weed out the slow-pays and shaky ones, or he at least holds them down to a fairly safe margin of credit. By doing this he is able to keep right on selling goods, through good and evil times, and thereby builds up a safe and enduring business connection. His Eastern competitors, on the other hand, do hardly any of these things, but when the rumor of good times in the West reaches their ears they flood the country with travellers, fill every store that will buy with goods, and then when disappointment follows the country gets the blame.

We hope that this is not going to be the case again this time. The West is all right, and most of the accounts will be all right if they are nursed carefully. In the meantime the only thing to be done is to refrain from crowding the slow ones too hard with additional goods. The connection should not be lost nor any needed supplies withheld, but there is a limit to what the country can absorb in the way of merchandise, and we believe that in the overleaping of this limit in the past the true explanation of the present scarcity of money is largely to be found.

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OUR VARNISH WAS AWARDED THE GOLD MEDAL OF MERIT AT THE JAMAICA EXHIBITION IN 1891, THE BRONZE MEDAL AT THE COLINDERIES IN 1887, AND SILVER OR BRONZE MEDALS AT ALL CANADIAN EXHIBITIONS

THEY HAVE STOOD THE TEST OF TIME AND COMPETITION THROUGHOUT THE WORLD

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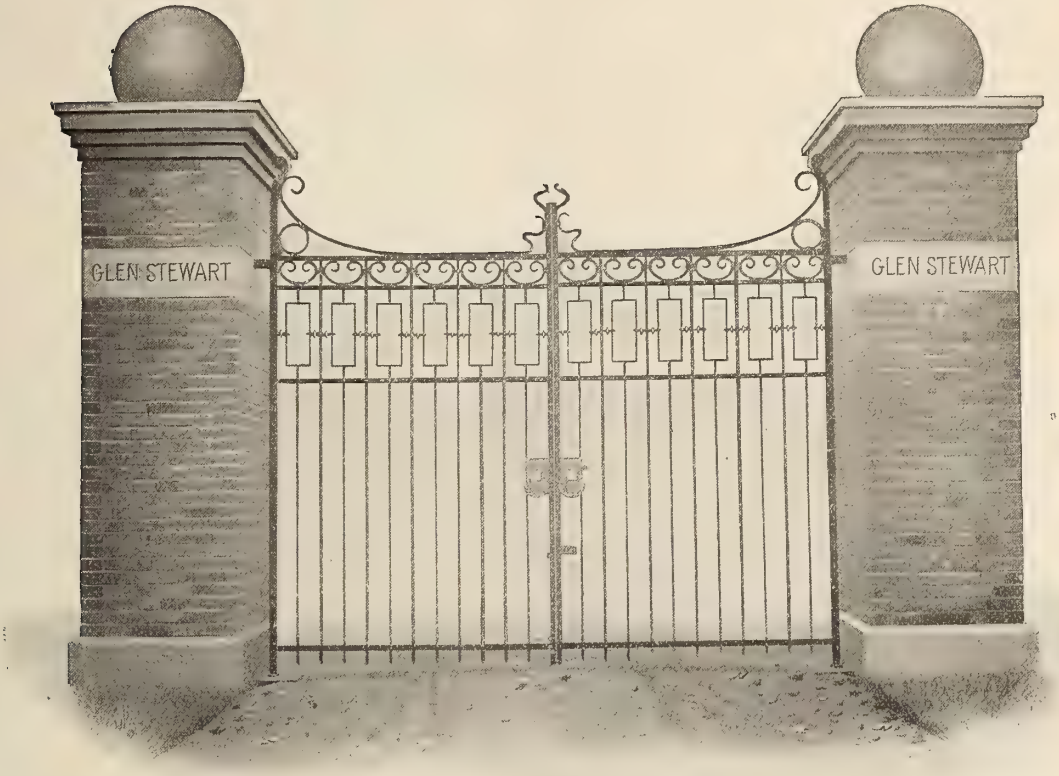
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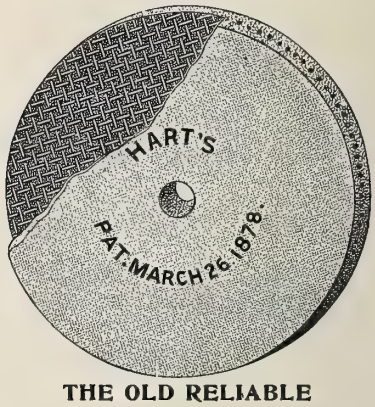
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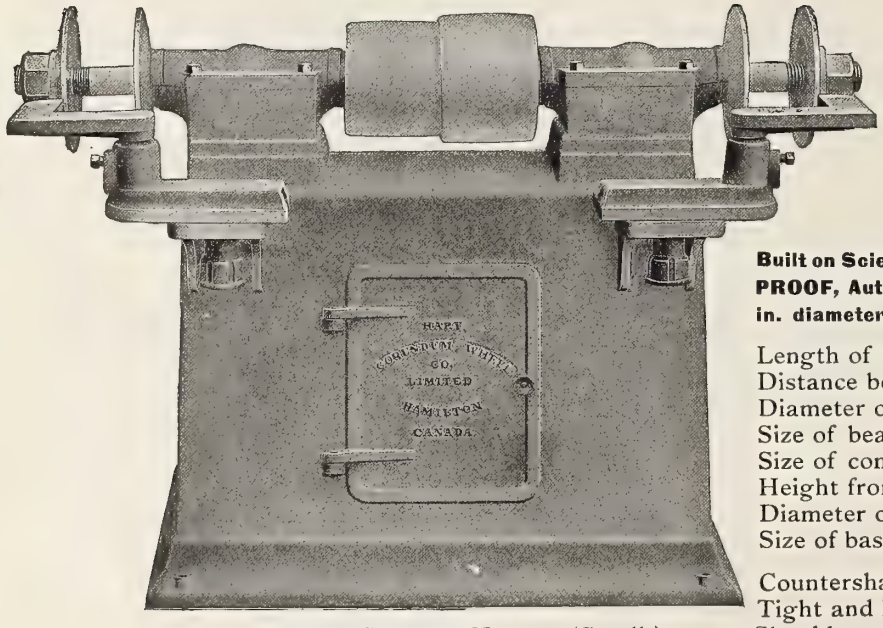
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No. 19

Built on Scientific Principles, Bearings absolutely DUST PROOF, Automatic Oilers, to carry 2 wheels 20 to 30 in. diameter, 4 in. thick.

Length of crucible steel arbor	57 inches
Distance between wheels	45 "
Diameter of arbor between collars	2 "
Size of bearings	12 x 2-1/16 "
Size of cone pulley on arbor	8 and 9 x 6½ "
Height from floor to centre of arbor	34 "
Diameter of collar	10 "
Size of base	31 x 41 "

Countershaft has cone pulleys 17 and 18 x 6½. Tight and loose pulleys 8 in. diameter, 7 in. face. Should run 450 revolutions per minute.

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In ordinary galvanizing the zinc merely forms a coating on the surface, a coating that any undue bending is liable to crack and cause an electrolytic action to ensue in the presence of moisture. The zinc plates turned out by our factory can be bent back and forth many times at sharp angles without exposing the coated iron or steel in the slightest crack or seam. Such galvanizing lasts and wears and satisfies.

Don't fall into the impolitic error of thinking it to a builder's or contractor's interest that a piece of galvanizing wear "NOT TOO LONG." The reputation gained and new work secured by the use of high-class Metal that wears the way ours does, outweighs any advantage that comes from renewing poorly done work.

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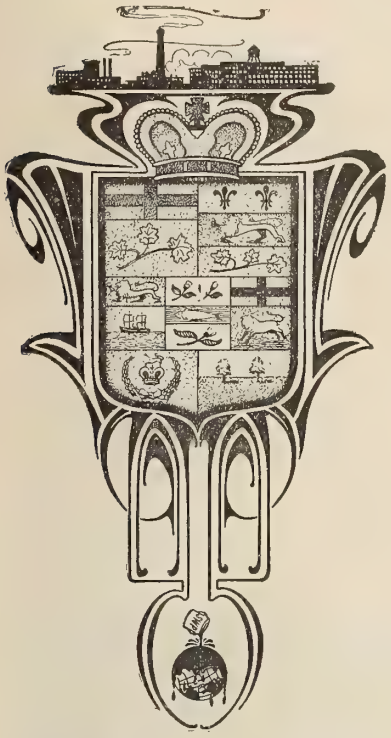
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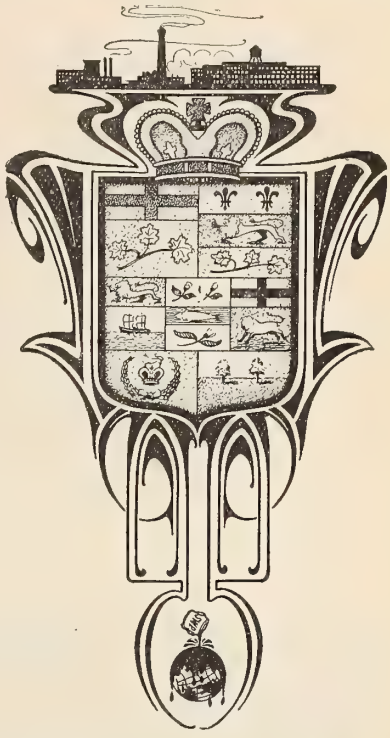
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make Paints and Varnishes for all kinds of good work. Our products include everything except artists' colors.

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For all parts of buildings, inside and outside, and for all household use.

For railway use.

For street railway use.

For marine use.

For structural steel, machinery builders, etc.

For builders of carriages, automobiles, wagons, implements and all other manufacturing purposes.

In Canada, a modern and fully equipped factory at Montreal and two large distributing depots and warehouses at Winnipeg and Toronto give unexcelled facilities for making and handling Sherwin-Williams Paints and Varnishes.

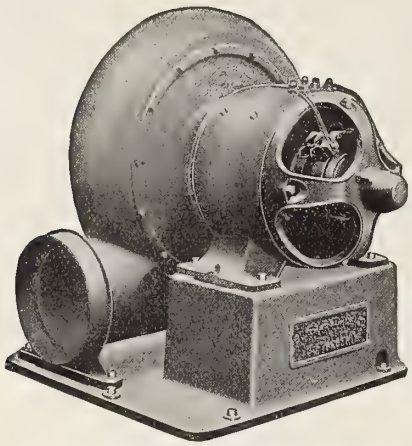
THE SHERWIN-WILLIAMS CO.

PAINT, VARNISH, COLOR, AND LINSEED OIL MAKERS.

CLEVELAND, CHICAGO, NEW YORK, NEWARK, BOSTON, KANSAS CITY, MONTREAL, TORONTO, WINNIPEG, SAN FRANCISCO, LOS ANGELES, SAN DIEGO, MINNEAPOLIS, PORTLAND, ORE., SAVANNAH, LONDON, ENG.

1428

For Application to any Industrial Purpose



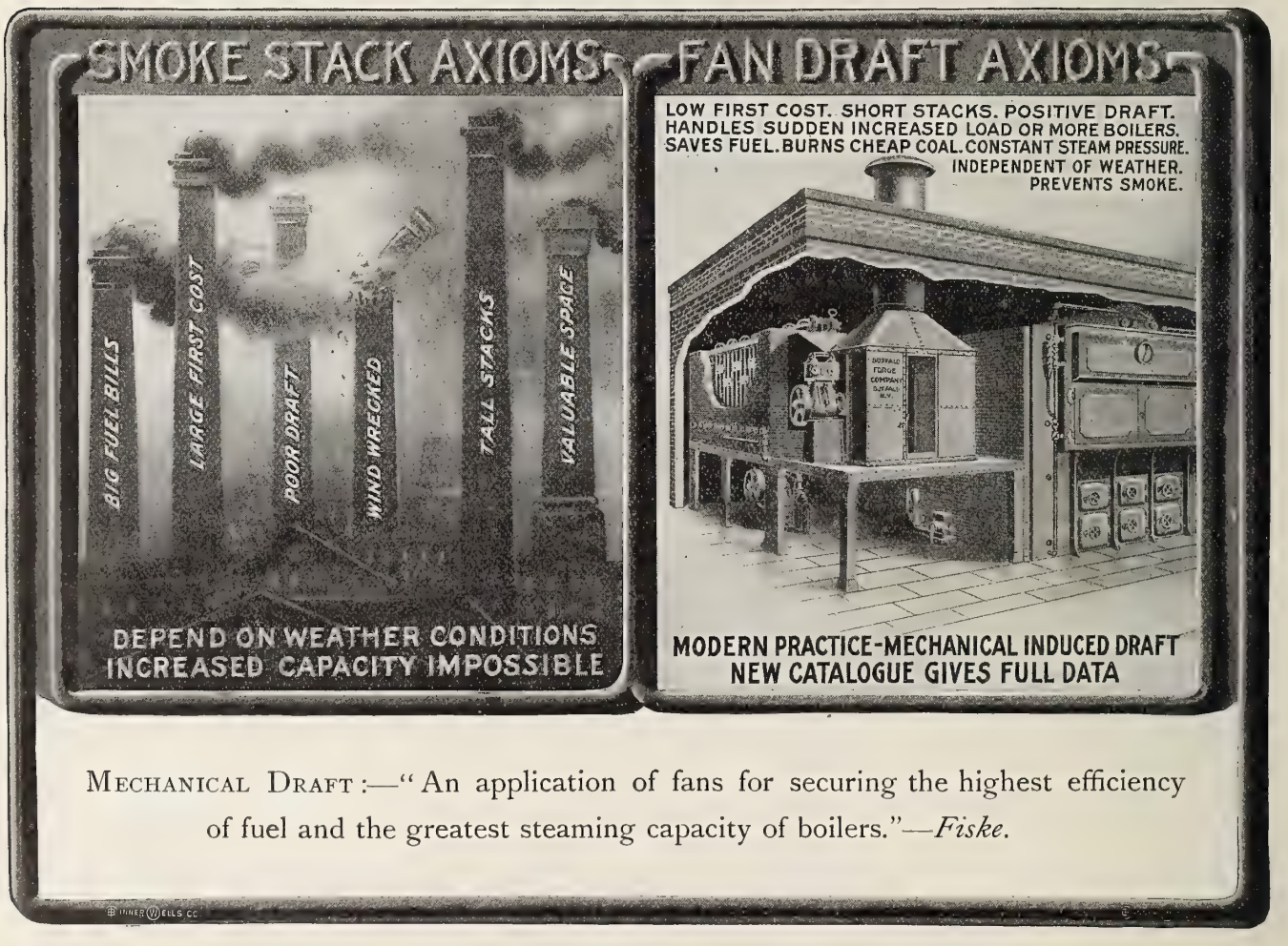
Electric, steam or belt driven blowers for forges or cupolas.



Blast gates for any service.



Canadian Buffalo portable forges, armour plate punches and ball-bearing drills.



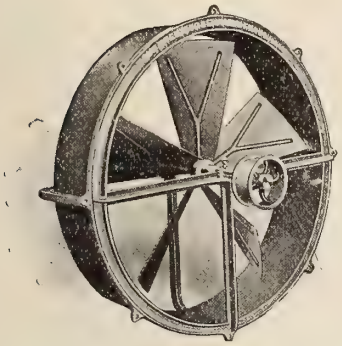
MECHANICAL DRAFT:—"An application of fans for securing the highest efficiency of fuel and the greatest steaming capacity of boilers."—*Fiske.*

Canadian Buffalo Forge Co., Limited

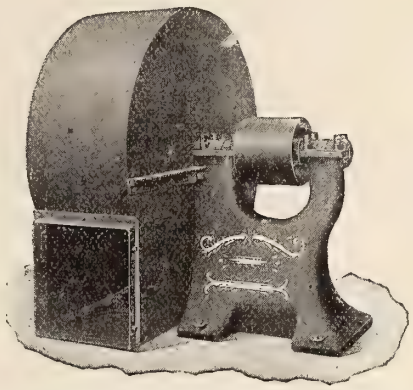
Manufacturers and Engineers

Office and Factory— - - - - MONTREAL, QUEBEC.

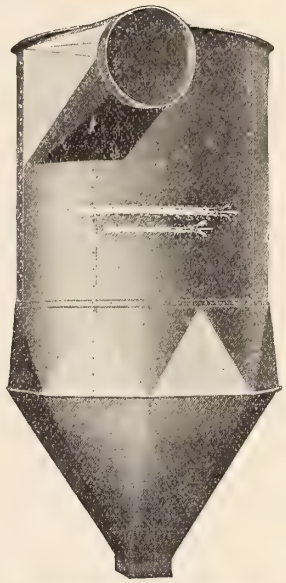
We Design and Manufacture Fans



"The air pure and cool refreshes the soul." About some parts of your works the men will never say that. Make life tolerable there; Canadian Buffalo Disk Fans the remedy; hot weather's ahead.



Canadian Buffalo Exhaust Fans for carrying shavings, dust, bark, cloth, emery or grain.





Canadian Buffalo Forge Co., Limited

Manufacturers and Engineers

Office and Factory— - - - - - - - - MONTREAL, QUEBEC.

THE

IDEAL ARCO BOILER

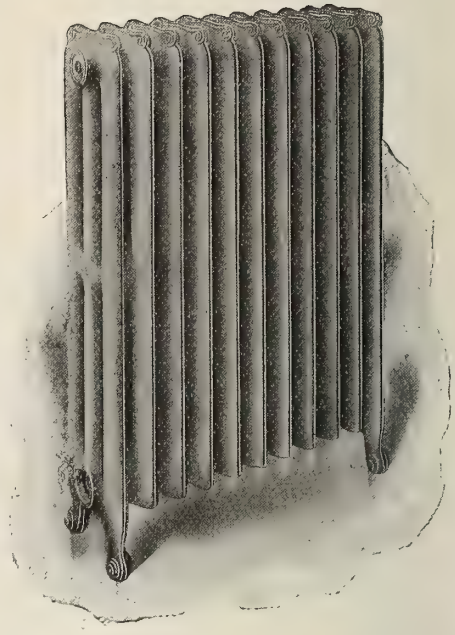
AND

SAFFORD RADIATOR

combine to form the most perfect heating apparatus known to science. No other system of heating has given such perfect satisfaction the world over. It has been found to embody everything that is good and nothing that is bad in theory or practical operation.

The Ideal Arco Boiler is perfection in efficiency and economy for producing hot water and steam for heating purposes.

"SAFFORD" RADIATORS have been adopted by the following representative institutions after the keenest competition with the world's best makers :—



His Majesty's Theatre, London.
His Majesty's Offices and Works, Birmingham, Eng.
His Majesty, the Emperor of Germany's Royal Palace, Berlin, Germany.
Institute of Mechanical Engineers, Storey's Gate, Westminster.
Metropolitan Police Headquarters, Scotland Yard, London.
Palace Hotel, Cairo, Egypt.
City Hall, Antwerp, Belgium.
Exploration Buildings, Johannesburg, South Africa.
City Hall and Court House, Toronto.
King Edward Hotel, Toronto.

These names speak in stronger terms than anything we can say.

The "SAFFORD" is made in every size and shape to suit all heights, curves, angles and walls. It is therefore adapted in beauty and design to all styles and plans of decoration.

Its efficiency is fully guaranteed by us.

The "SAFFORD'S" scientific construction is world-famed. Its heavy malleable iron screw-threaded nipple connections are the envy of every manufacturer.

The TRIDENT, the "SAFFORD'S" new Three Column Radiator, is a step in advance of all others, giving greater radiating surface, therefore greater efficiency.

"SAFFORDS" have no bolts, rods, nuts or packing to get out of order, they are guaranteed absolutely non-leakable and can be taken apart and enlarged or altered with perfect ease.

OUR ILLUSTRATED CATALOGUE WILL GIVE YOU MORE INFORMATION REGARDING THIS QUEEN OF RADIATORS. IT IS YOURS FOR THE ASKING.

The Dominion Radiator Co., Ltd.

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Branches : MONTREAL. QUEBEC. ST. JOHN, N.B. WINNIPEG. VANCOUVER. LONDON, ENG. EDINBURGH. GLASGOW. ANTWERP. BERLIN. CHRISTIANA. AUCKLAND, N.Z. JOHANNESBURG, S.A.

DODGE

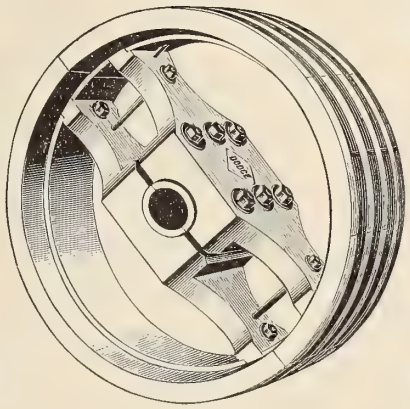
STANDARD WOOD SPLIT PULLEYS

With Standardized Interchangeable Bushing System.

In perfect Balance

Finished Waterproof

Positive Compression



"Recognized the world over as the 'BEST' in Wood Pulleys."

OUTPUT AND SALES EXCEED THAT OF ALL OTHERS COMBINED.

CARRIED IN STOCK BY THE PRINCIPAL HOUSES IN EACH IMPORTANT CENTRE.

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THE WORLD'S BEST

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SHOE POLISH

HAS NO EQUAL



It is the quickest and brightest polish in the world. It contains no turpentine, or anything that will injure the leather. It is a leather food.

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Unequalled for Working 

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Every Sheet Guaranteed

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"Queen's Head" and "Southern Cross" Dead Flat Refined Steel.

Tack Sheets Electrical Sheets and other special grades.

Merchant Quality Black Sheets all sizes and gauges.

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Pig Iron, Bars and Hoops of all kinds.

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The Largest Staff.

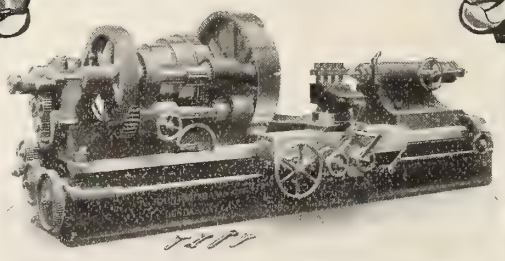
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The persuasive quality of advertising is practically doubled by an A1 illustration.—It impresses the possible customer with a definite idea of your product no word-picture could impart. *Vice-versa*, a poor illustration condemns your work at the outset. It's a positive sale-killer. Isn't it folly, therefore, to allow valuable space to carry a cut which is a libel on your goods? ℂ. The most extensive illustrating business in Canada has been built on the sound basis of high quality and a fair price, and—*it belongs to us.*

Draw your own conclusions



THE TORONTO ENGRAVING Co. LIMITED

92 BAY ST TORONTO.

The Canadian Northern Railway Company.

A Powerful Factor in the West's Development.

In the history of the Canadian Northern Railway are embodied the characteristics of a progressive Canadian enterprise. Its record is rich with confidence in the resources and development of the great West and is full of evidence of faith in the country as a whole. In its progress the combination of business foresight and aggressive energy with clear-headed logic and excellent practicability has proved irresistible and, within eight years, has enabled Messrs. William Mackenzie and D. D. Mann to expand a small independent line in the Dauphin region of Manitoba into a national railway stretching 2,500 miles through the richest wheat lands in the world, tapping the trade of a continent at the head of the Great Lakes, and reaching into a future of still greater development.

The first year's operation of the line running 100 miles out from Gladstone demonstrated that with economical management the earnings could pay both working expenses and fixed charges, and the experience gained was adopted as a part of the policy of the Road.

Many and large unserved grain areas invitingly awaited the railway builders. The Government wisely continued the small bond per mile guarantee and the work of extending the line was rapidly pushed.

Other charters were steadily acquired reaching from Winnipeg to the wooded Lake-of-the-Woods region and across the Provincial boundaries into the rich Rainy River country and the mineral regions and vast lumber districts of Northern Ontario to Port Arthur, at the head of lake navigation and itself a natural shipping centre of the great West. All this preliminary work was carried out with the same caution as had characterized the first bit of construction from Gladstone. Each portion of the seemingly detached enterprises was made to pay its way until the time came to combine them all in one great railway. This time was hastened by the arrangement with the Provincial Government by which the Manitoban lines of the Northern Pacific Railway—reaching from the International Boundary to Winnipeg, with branches from Morris to Brandon and Hartney, through Southern Manitoba's richest wheat fields and past the productive plains of Portage la Prairie and extending within a few miles of Gladstone—were taken over for operation by the Canadian Northern. This was in June, 1901, and this increase of mileage, together with that of the completed line between Winnipeg and Port Arthur—taken over for operation early in 1902, made a total mileage for the Road at that time of 1,250 miles. The opening of this second outlet to the Great Lakes for western grain was heralded by the people of Manitoba as an event of inestimable importance in the great West's progress. The results from the first year's operation after the opening of the Port Arthur gateway showed gross earnings $2,449,579—a gratifying surplus of $222,921 over operating expenses ($1,589,293) and fixed charges ($637,364).

The London market showed its faith in the enterprise by readily responding to Mr. Mackenzie's appeal for funds to finance the Road's various extensions and to help provide equipment to take care of the ever increasing traffic. Further progress was astonishingly rapid. The railway was soon traversing the beautiful, undulating and productive valleys of the North and South Saskatchewan—the very cream of wheat lands—and pressing on to the temporary objective point—Edmonton. The latter will be reached this Autumn. From this centre a magnificent wheat region larger than Manitoba will be tapped. With the completion of the line to Edmonton the Canadian Northern will present the unique feature of a railway's main line passing through continuously a thousand miles of the richest wheat lands in the world. That the results of shipments from this enormous wheat field are awaited with great anticipation goes without saying.

Confidence of Capital in the Enterprise.

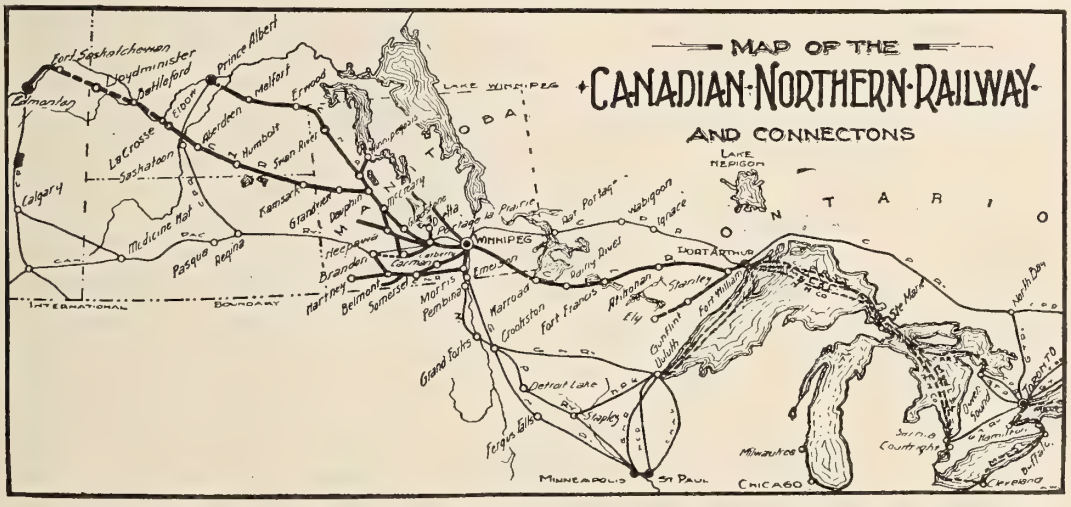
An interesting feature in this record is the comparative ease with which the railway has been financed. All of its issues are held in London and New York, and a recent issue of $3,000,000, of four per cent. perpetual consolidated debenture stock was oversubscribed several times.

Some other elements of interest in the present growth and future development of the Road may be summarized here:—

(1) The bonded indebtedness of the railway is lower than that of any line in the world under anything like similar conditions, and constitutes a most flattering comparison with United States roads in particular.

(2) The fact that each portion of the line was self-supporting as soon as completed.

(3) The diversity of interests tributary to the railway is unusual—growing cities and towns and rural population; the unprecedented and increasing productiveness of the territory touched the grain and timber and mines and cattle ranches spread along its course; the entire absence of any unproductive territory.



(4) The tremendous growth of the Canadian West and the projection of the company's lines in those sections which by their richness are attracting the greater bulk of immigration, making practically every incoming settler and every new farm and growing village a unit contributing to the success of the Road.

(5) In Winnipeg, which is now a great and over-growing centre, the terminals of the railway are in the very heart of the City, close to, and tapping the entire industrial district.

(6) At Port Arthur enormous wheat elevators have been erected, having a combined storage capacity of 7,000,000 bushels and excellent facilities for receiving and delivering grain.

(7) The immense and now developing resources of New Ontario in iron and other minerals have encouraged capitalists to establish a large smelting plant at Port Arthur, and in connection with this are being laid out coal and ore docks, having a combined capacity of half a million tons and an up-to-date shipping plant adequate to meet the growing demands of the West for years to come. It is confidently expected that the ore tonnage of this Road will in a few years' time equal the enormous wheat traffic now annually transported to the lake front.

The figures for the fiscal year ended June 30th, were as follows:—

Gross earnings	$3,242,702.69
Operating expenses	2,120,772.43
Net earnings	1,121,930.26
Fixed charges	805,528.55
Surplus for the year	316,401.71

Change Variety of Goods: Not Customers

YOU may have been doing a retail carriage and cutter business for years, and perhaps in such a way that while you increase your trade, don't feel you have the hold on your customers you consider you should. Now suppose this is how it is.

Haven't you been buying from builders who present much the same old styles every season, and after a talk on matters of little or no account, you give a specification "about the same as last year," and it's ended.

The traveller goes away happy because he got your order.

You're glad because you've ordered and it's off your mind in a way?

Some day a traveller comes along, perhaps one who has been coming every season, but you never really got up to where you thought you wanted to do business.

Perhaps it was his fault, maybe yours, but anyway this time you go through his catalogue and see styles you never thought of. Many no doubt would never sell in your territory, but of the others, one or two an odd customer has tried to describe, having seen somewhere; but after a while you sold something else, because you hadn't what he wanted, and he didn't know where to get it.

Now: Don't you know you'd feel sorry having ordered, and wish you were free to get some of the other people's good things?

Most men in the trade would be.

Well now, consider YOUR customer in the same way. You may think that you're doing the only carriage trade worth talking about is going to keep your customers satisfied with what you buy and sell them.

One day somebody with a nice stepping horse and good buggy will come in from a nearby town and meet the fellows you've been selling, and perhaps the nice buggy will be about what your man wanted and couldn't get of you. Isn't he sort of unsatisfied? Maybe not much, but still about like you would be, seeing the nicest goods catalogued, and having bought enough ordinary, every-day kind for your wants.

If this is the way you consider things are with you, why not let us sell you? We want to badly enough.

Even suppose you don't fit in this class, do you think it would do your trade any harm to show something different from the others? (And that's where we fit in.)

Catalogues and prices cheerfully submitted.

THE
NOVA SCOTIA CARRIAGE CO.
LTD.

KENTVILLE, N.S.

"MADE IN CANADA"

SADLER & HAWORTH

TANNERS & MANUFACTURERS OF

OAK LEATHER BELTING

WE TALK QUALITY

BECAUSE WE KNOW THAT WHEN YOU BUY BELTING YOU WANT THE RIGHT KIND. THE MEMORY OF QUALITY LASTS LONG AFTER THE PRICE HAS BEEN FORGOTTEN.

USE OUR
"AMPHIBIA"
WATERPROOF
LEATHER BELT
FOR WET PLACES



CABLE ADDRESS:
"SADLER."
WESTERN UNION
AND
PRIVATE CODES
USED

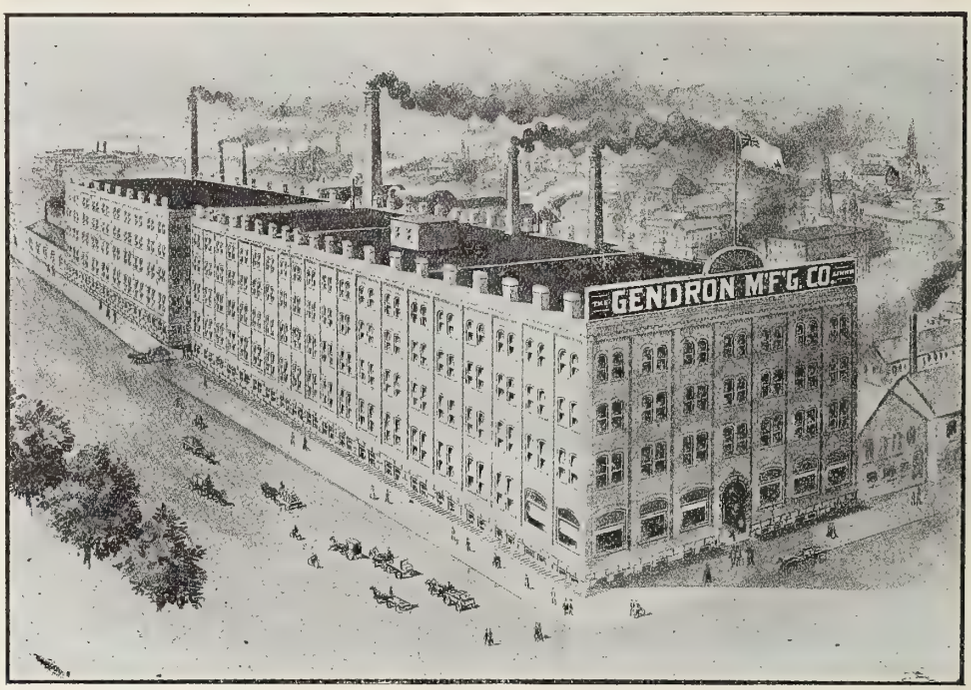
"LEATHER LIKE GOLD HAS NO SUBSTITUTE"

MONTREAL
COR. WILLIAM AND SEIGNEURS STREETS

TORONTO
9 JORDAN STREET

THE HOME OF THE

Manufacturers of Children's Vehicles.

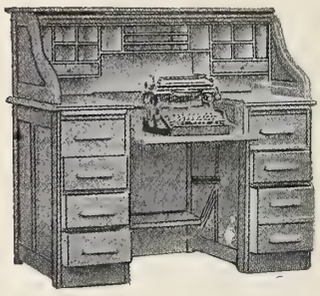


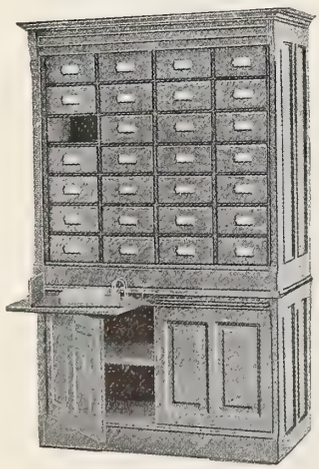
Reed and Rattan Furniture.

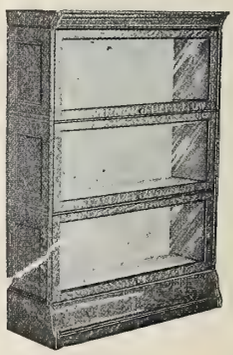
THE GENDRON MANUFACTURING CO., LIMITED.
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Canada Cabinet Company Limited

GANANOQUE, ONTARIO.







(Set Up)

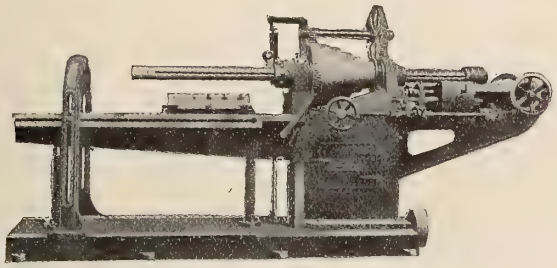
Manufacturers of

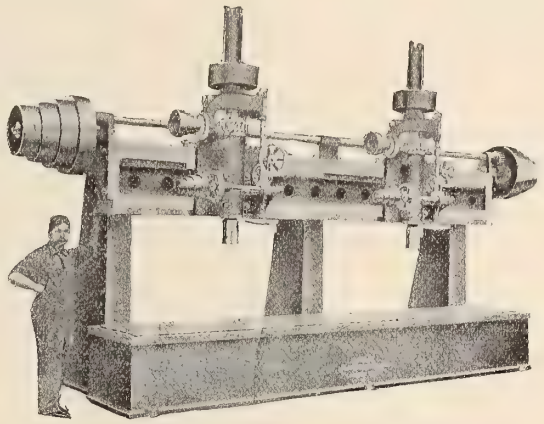
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Desks



(Glass lid down.)

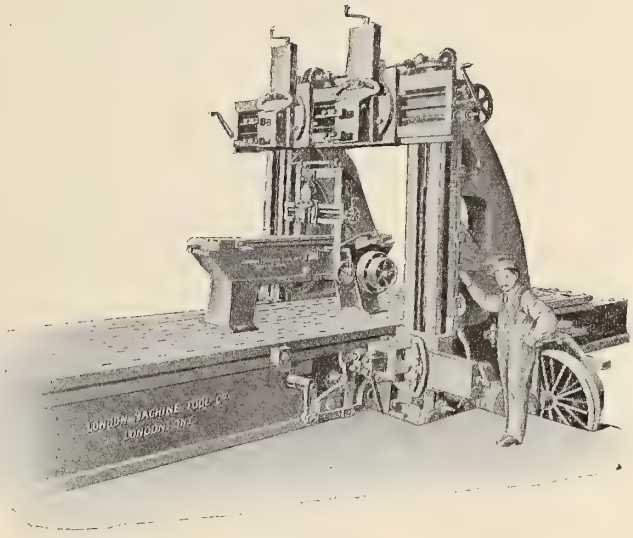
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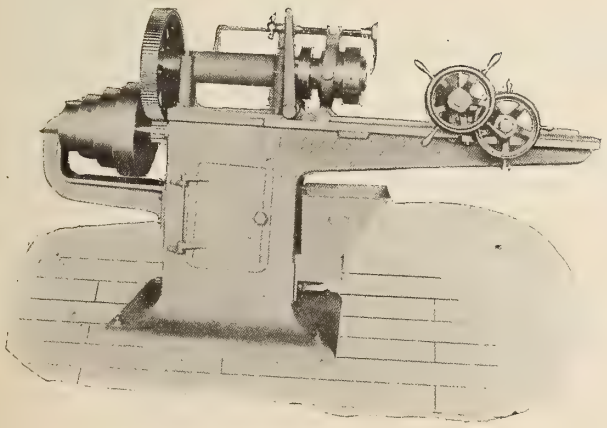
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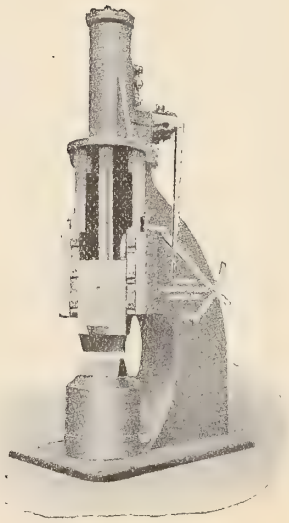
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OLD ! STRONG ! RELIABLE ! PROMPT !

The Ontario Accident Insurance Company.

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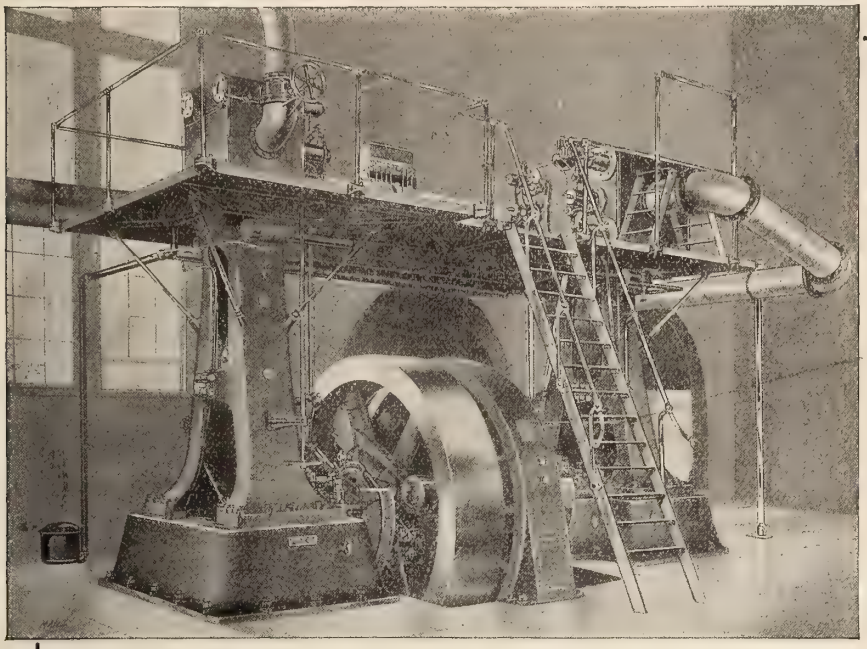
Offer exceptional facilities to agents and brokers handling the lines indicated, AND TO THE GLASS TRADE.

OFFICES:

The Eastmure & Lightbourn Building

61-65 ADELAIDE ST. EAST, TORONTO.

ARTHUR L. EASTMURE FRANCIS J. LIGHTBOURN



Robb-Armstrong Corliss Engines

Horizontal and vertical; simple, tandem and cross compound.

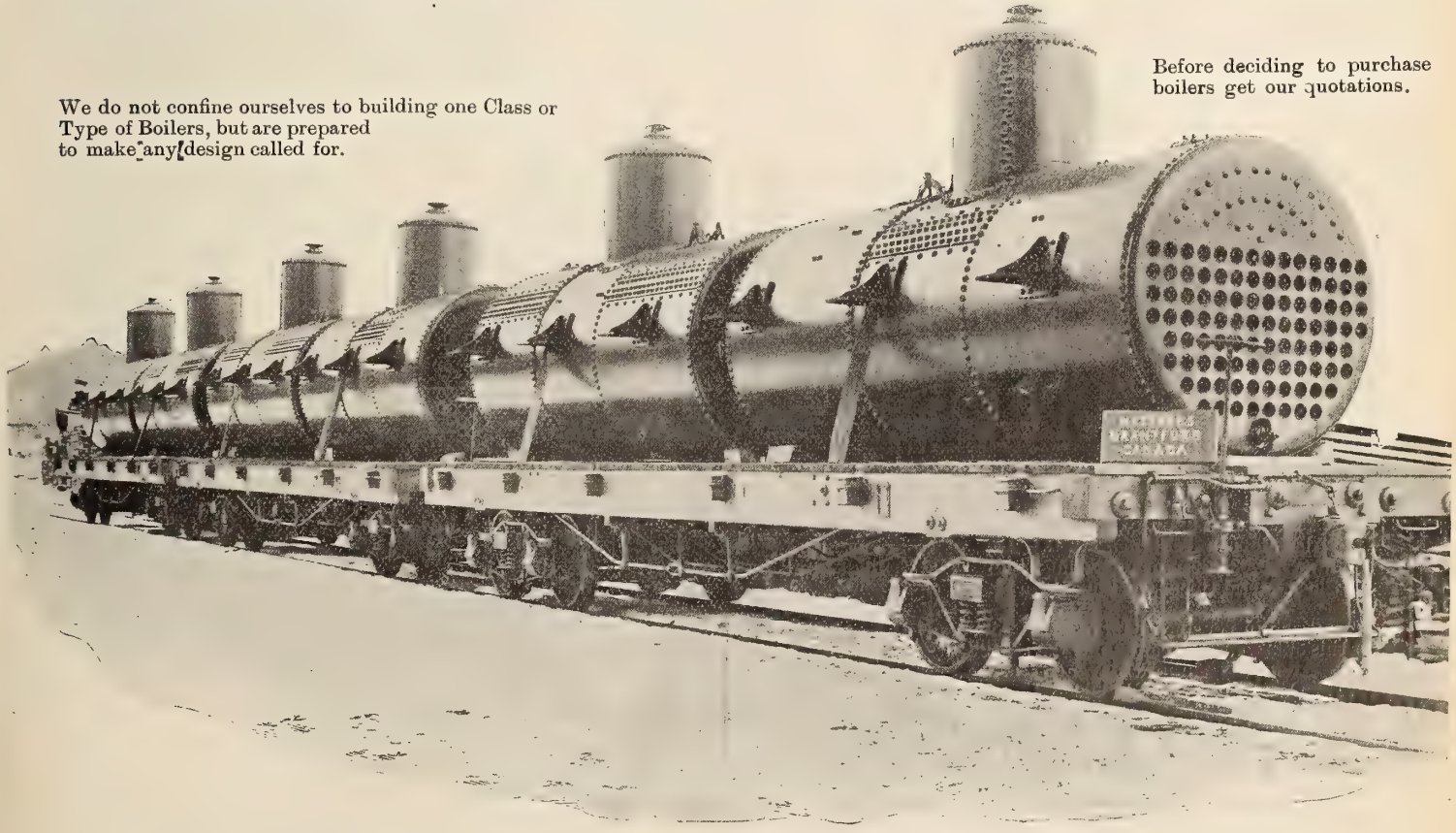
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AGENTS—Wm. McKay, 320 Ossington Avenue, TORONTO. Watson Jack & Company, Bell Telephone Building, MONTREAL.
J. F. Porter, 355 Carlton Street, WINNIPEG.

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Before deciding to purchase boilers get our quotations.





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ONLY VITRIFIED EMERY AND . . . CORUNDUM WHEELS MADE IN CANADA.

Why do 75% of the manufacturers in the United States use Vitrified wheels? Because they last longer and cut faster than a wheel made from any other process. All impurities are burnt out of the emery and bond, leaving nothing but cutting properties, therefore the Vitrified wheel will not glaze as an ordinary Silicate wheel will do.

Will be pleased to send samples on approval.

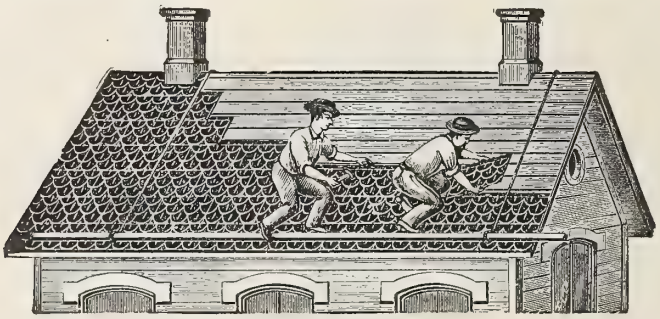
NOTE.—We manufacture all special shapes and sizes of wheels used on all makes of universal grinding machinery.

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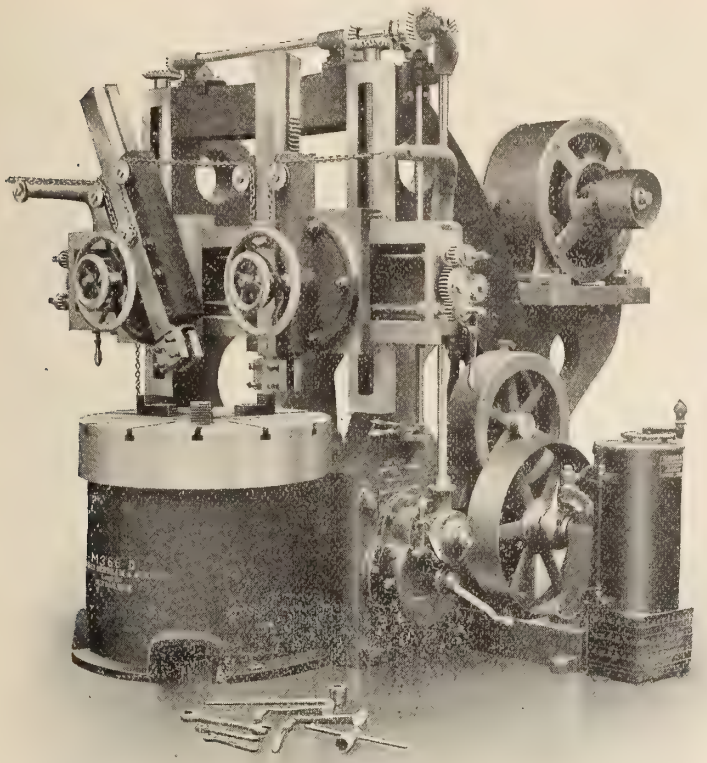
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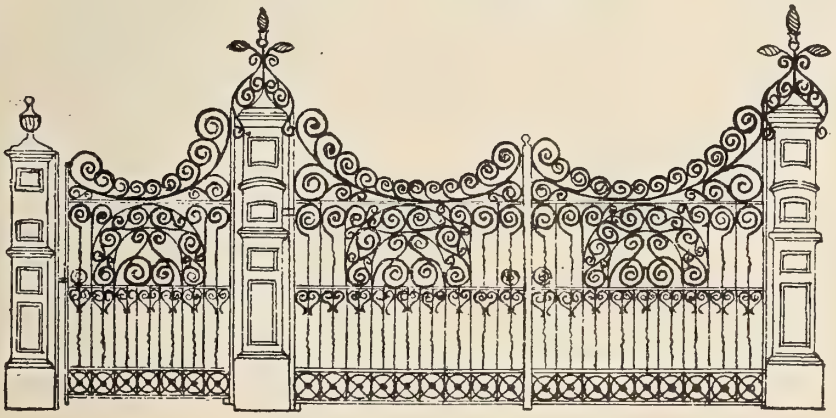
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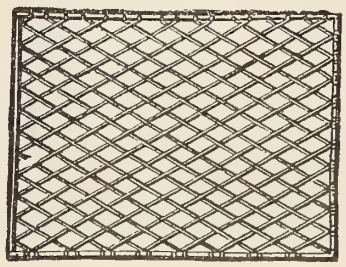
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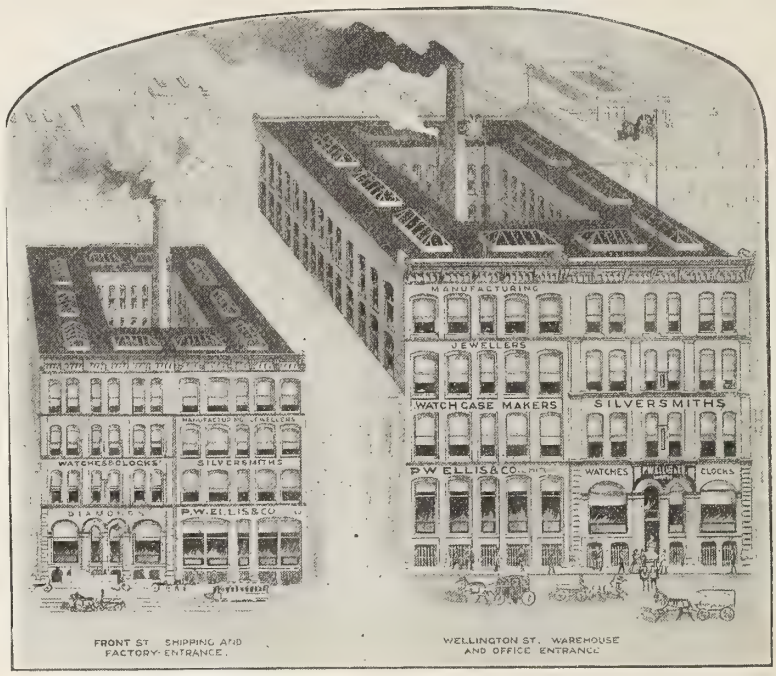
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GEO. E. WALKER, Manager.

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5th. Are subject to rigid inspection and highest sanitary conditions.

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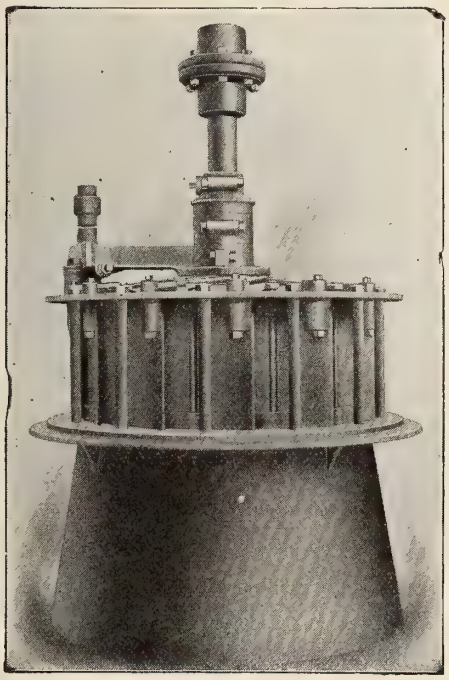
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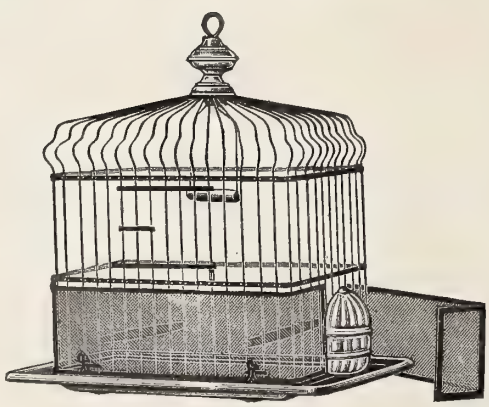
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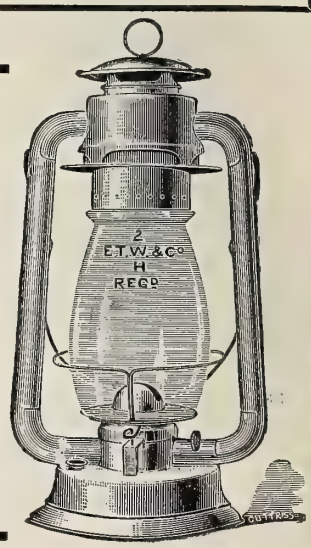


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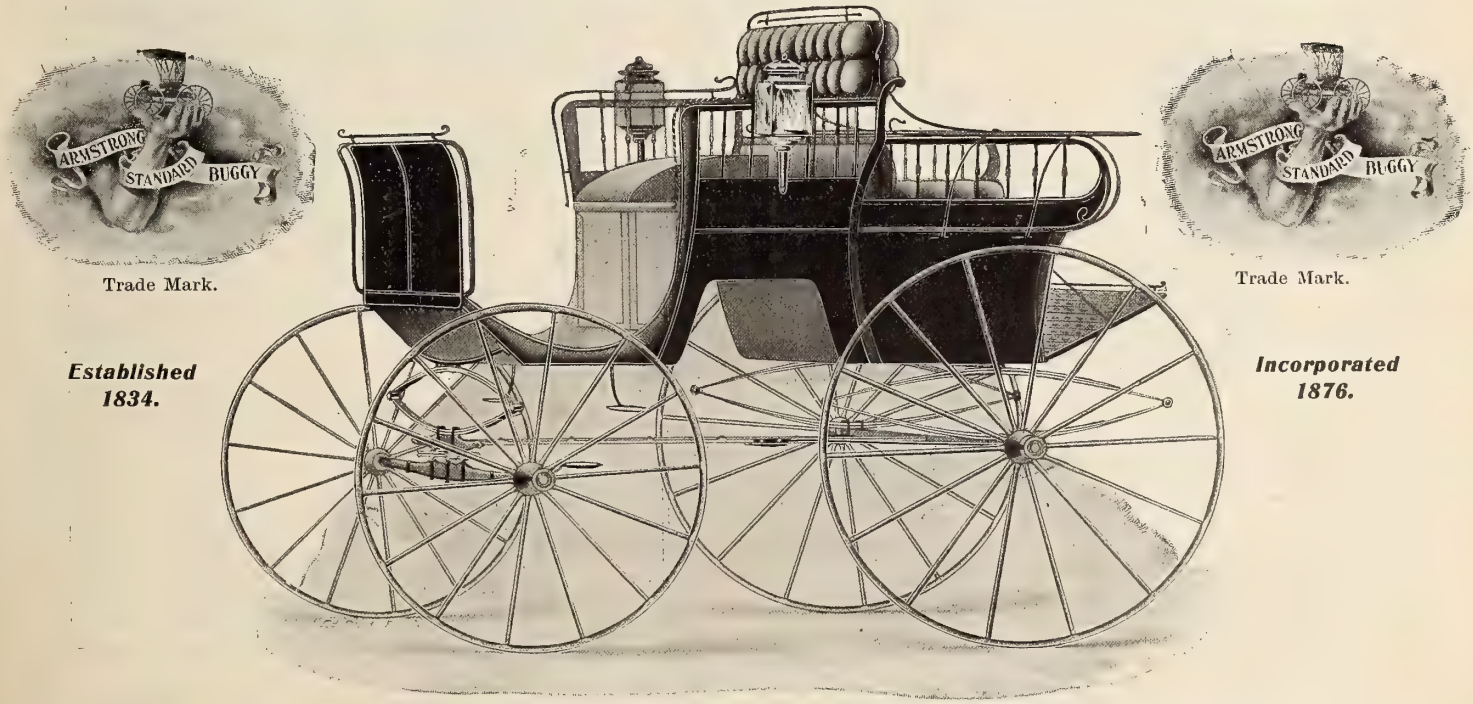
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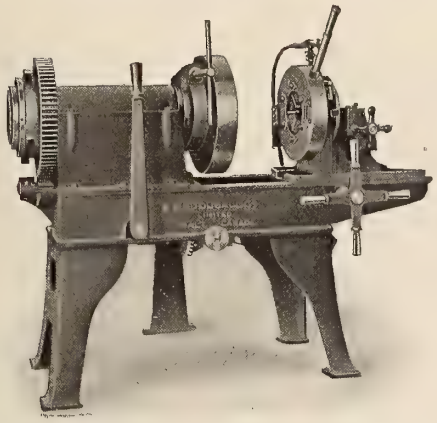
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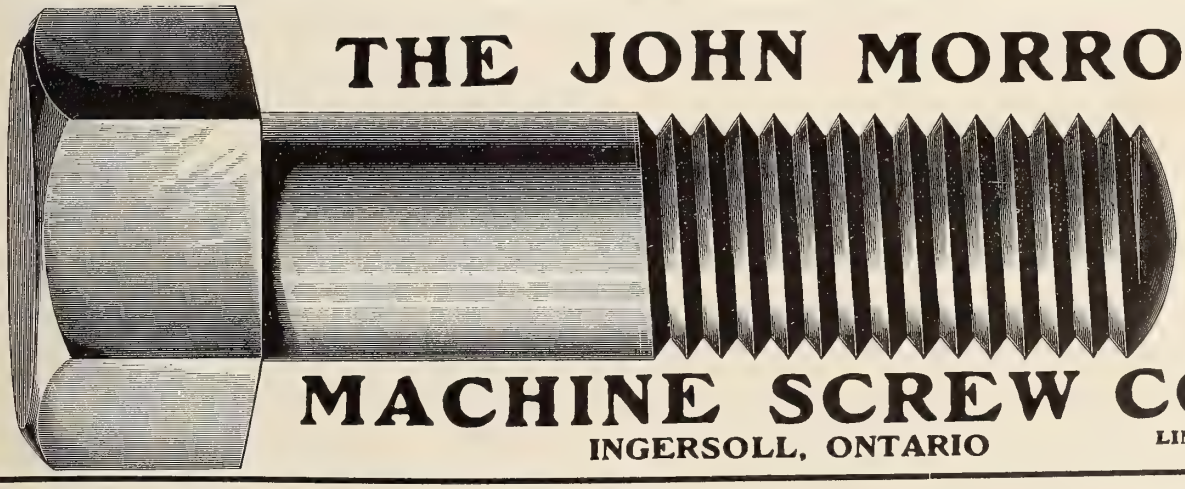
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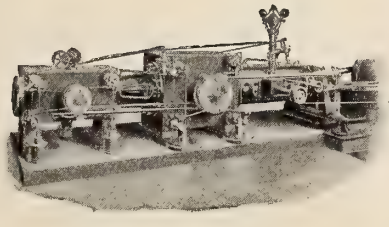
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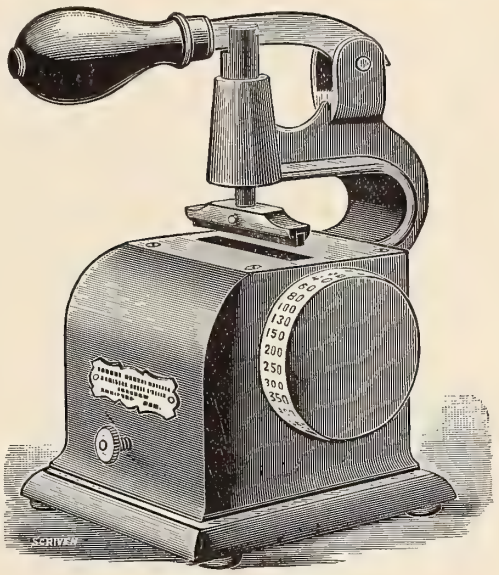
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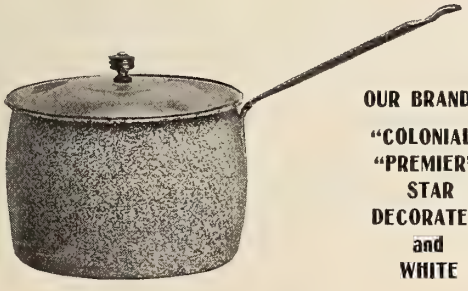
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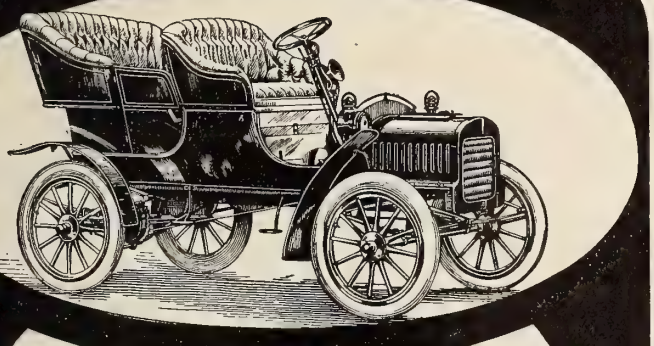
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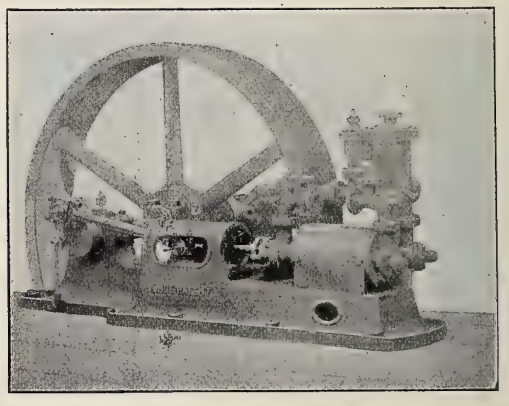


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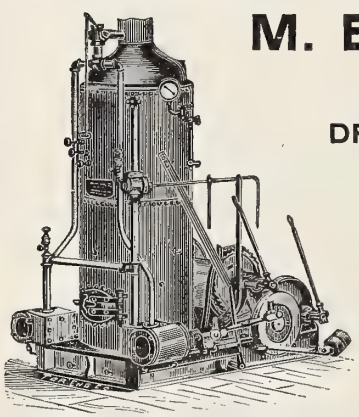


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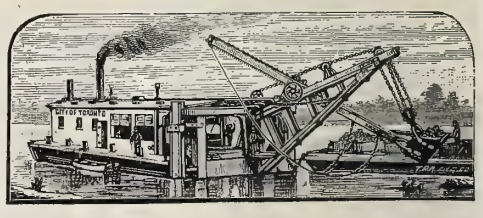
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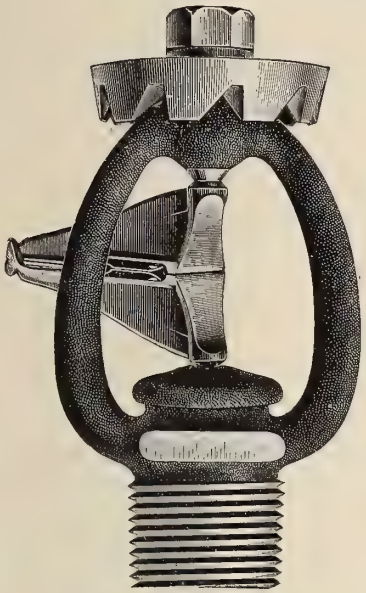
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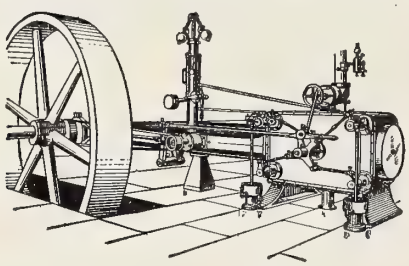
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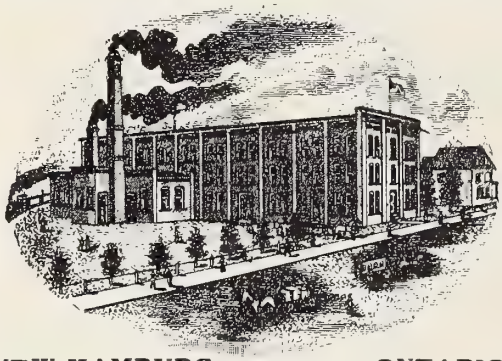
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A MONTHLY REVIEW OF MANUFACTURE AND COMMERCE

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Vol. V. TORONTO, JULY, 1905. No. 12

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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C. F. WHEATON,
AND THE GENERAL OFFICERS OF THE ASSOCIATION (Ex-officio.)

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General Secretary, R. J. YOUNGE.
Business Manager, J. F. M. STEWART.
Editor, G. M. MURRAY.
Advertising Manager, B. L. ANDERSON.

THE MANUFACTURERS IN BRITAIN.

WITH the information at hand INDUSTRIAL CANADA can do no more in this issue than to record, on behalf of the Canadian Manufacturers' Association, a grateful appreciation of the very kindly reception extended to the members of the Association by every one in the dear old British Isles. The enthusiasm and cordiality could not be exceeded. Everything has been on a magnificent scale and it has been appreciated just as much by those in Canada as by the travellers. The kindly invitation of His Majesty has been but a further evidence of his great personal interest in "His Dominions beyond the Seas," and was all that was needed to make the Canadian Manufacturers' Association tour of 1905 a wonderful and complete success.

An official full report of the tour will be published in following issues of INDUSTRIAL CANADA.

TORONTO'S IMPORTS.

THE Toronto *Star* recently said:

"If it be true that figures cannot lie, then it seems to be certain that Toronto is wresting from her rival, Montreal, the title of Canada's commercial metropolis. The Customs returns are a fairly good indication of the mercantile business done in each city, and the figures for the month of April need no comment in this regard. At the port of Toronto during April the increase over the receipts of April, 1904, was $80,804, and the total returns for the month were $747,042. At Montreal there was a decrease in the same period of $12,000, and the total returns amounted to only about $27,000 more than the cash turned into the Customs House in this city. Not very long ago the receipts at Montreal were invariably almost double those of Toronto. It is a fact well borne out by the figures for past periods that while the receipts at Toronto have been increasing with steady rapidity, even at the rate of a million dollars a year for the past four years, the returns at Montreal have shown, on the contrary, a steady decrease. It is quite clear, therefore, that Toronto is becoming a great distributing center, and that the purchasing power of Ontario is much greater than it was."

A very much better indication of the relative importance of Montreal and Toronto would be the quantity of goods shipped from the factories of each city. A great increase in importations does not necessarily indicate prosperity. It may simply mean that Toronto representatives of foreign manufacturers are getting orders that should be given to Toronto manufacturers or that they are depriving manufacturers in the small Ontario towns of orders. Goods imported during the month of April may come in competition for months afterward with goods "Made in Canada."

In both Montreal and Toronto some of the leading wholesale houses handle both Canadian goods and imported goods. After the National Policy was adopted in 1879 many wholesale houses which formerly handled only imported goods began to sell Canadian goods also and in some cases they invested money in Canadian factories making the class of goods which they had been accustomed to import. After the protection for woollen manufacturers was reduced in 1879 some of the wholesale houses which had been handling Canadian woollens extensively substituted British woollen goods for them. Let us suppose, for example, that two wholesale houses, one in Toronto and the other in Montreal, are handling a certain line of imported goods for which the demand is steadily increasing with the growth of Canada. The manufacture of these goods gives employment in the United States to 600 men. A factory for the manufacture of such goods is established in Montreal giving employment to 300 men, and the Montreal wholesale house transfers its orders to the Canadian factory, while the Toronto house continues to import the goods it sells. Under such circumstances an increase in the value of Toronto imports as compared with Montreal imports would not indicate that Montreal was losing ground as a distributing center in competition with Toronto. The three hundred men employed in the Canadian factory would with their families add about 1,500 people to the population of Montreal. The Toronto wholesale house would give employment only to a few clerks, shippers and commercial travellers. Of course the importation of some classes of goods—things that cannot be produced in Canada—is necessary, and the increase of such imports may indicate prosperity, but it is absurd to take the total figures

of imports without considering their character and assume that an enormous increase in the consumption of imported goods is a matter for gratification.

Toronto is undoubtedly growing in importance as a distributing center and the number of factories is continually increasing, but over-importations of goods of the same class as our Toronto factories manufacture will not contribute to the prosperity of Ontario's greatest city.

A MOST ELOQUENT SALESMAN.

THERE has never been an effort to introduce Canadian manufactured goods to buyers abroad that has met with such success as the Canadian Trade Index. Every foreign mail brings with it one or more trade inquiry forms taken from the Index asking for the best places to purchase certain articles or requesting assistance in securing agencies. These in turn are forwarded to the members of the Canadian Manufacturers' Association and time and time again result in business. The inquiries sent out by the Association are counted by thousands, and members of the Association everywhere acknowledge their receipt direct from foreign buyers.

Not only is the Trade Index a creditable publication and a great Canadian advertisement and business-getter abroad, but in Canada, where over three thousand copies are distributed to the most important purchasers, it is used as a daily reference book.

The fourth edition—10,000 copies—is now being compiled. It is two years since the publication of the last edition. The new book will contain information about the products of 1,850 factories. It will be well printed, the advertisements on coated paper, neatly bound and judiciously distributed. Each member of the Association is entitled to a full announcement of his business without charge, and is given the opportunity of making a display announcement at a very moderate cost.

NO LEGALIZED UNION LABEL FOR CANADA.

THE efforts of the Labor Unions of Canada to secure legislation similar to that in force in the United States have not met with much encouragement, in fact the results of advanced labor legislation across the line have given to the Canadian Parliament the very best reasons for refusing to pass the Union Label Bill.

The Unions never made a harder fight to have their label legalized than they did this session. This was necessary because the danger of the legislation is becoming more fully appreciated. But in spite of the favorable consideration labor legislation is entitled to, and always receives, the Unions have again been given notice that Canada is a free country, and that class legislation of this nature will not be tolerated.

The Label Bill was before the Dominion Parliament from January 30th to June 27th, on which date the Banking and Commerce Committee decided to report to the Senate that it was not expedient to pass the Bill. For this five months the Labor Unions have been continuously represented at Ottawa, and they have spared no effort.

When it was before the House of Commons the discussion showed that it was regarded as dangerous, and its application was limited by making it apply only to incorporated unions. It did not, however, in its amended form, find favor with the Senate, and the Banking and Commerce Committee, after listening to the argument on behalf of the Unions and on behalf of the Canadian Manufacturers' Association, dealt with it as above.

Increased Parliamentary powers and privileges for labor unions, so long as unions are conducted and controlled as at present, are not approved of by the great body of Canadians, and so long as this is the case the elected house of Parliament will scrutinize legislation very carefully, and the Senate has spoken its mind in no doubtful way. The manufacturers and employers, the free laboring men and the general public appreciate to the fullest extent, the wisdom of the Senate's action in safeguarding the peace and progress of our young industrial country by defeating this dangerous measure.

CANADA'S WOOLLEN PRODUCTS TO THE FORE.

THE Wholesale Dry Goods Section of the Board of Trade of Toronto has just issued its annual report. The members of this section are engaged in the wholesale and distributing business. They purchase from Canadian manufacturers or import from foreign manufacturers such goods as they believe will meet the requirements of the retail trade of Canada. Their purchasing is done where the best value for the money can be secured. They have then in their published report given an expert opinion which furnishes the best possible recommendation for the products of Canadian garment and knitted goods factories. They also give a disinterested and conclusive answer to that small section of our population which believes that Canadian factories are not up to date and that Canada is not destined to have a much larger and more prosperous woollen industry than it has to-day.

The report says:—"In men's and women's and children's clothing, Canada has more than held her own, and has done this, too, without any special protection. It has been demonstrated that this country can, with advantage, convert cloth into garments. It has not been so clearly established that the same skill has been shown in the manufacture of textiles which are the raw material of this most important industry."

This last sentence coming from the same source must be considered equally important. It is a fact that the textile manufacturers have suffered possibly more than any other industry under the application of the preferential tariff. A number of mills have had to close down, and most of those operating are doing so in the hope that the Canadian tariff will be increased to at least what it was before the preferential reduction. It is only reasonable to assume that the textile industry in Canada can be conducted—if given sufficient tariff protection—just as successfully as the knitting industry about which the Dry Goods Section of the Board of Trade says:—"In knitted underwear of all kinds, Canada has little to fear. In workmanship, style and finish no better goods are made anywhere. Great improvement is noticeable in Canadian hosiery. Even in full fashioned cashmere goods, the product is of high order."

When our knitted goods men have demonstrated their ability and our textile men have, according to the report referred to, "not so clearly established" their ability, is it not a critical time and a time when these industries should be well fed and not starved and kept struggling because of too low a tariff? Or will the arguments be used that because the knitted goods men have made such fine products under the present tariff they have sufficient protection and because the textile men have not been able, in the face of more serious competition, to advance so successfully, that their products are not of such a high order as to deserve the assistance that only a government can give? An increase in the tariff would not assist the mills that have closed down, but it would save other mills from a similar fate.

NOTICES.

ANNUAL MEETING — Montreal Branch — Board of Trade Building, Montreal. Thursday, August 24th, 2 p.m.

ANNUAL MEETING — Toronto Branch — Board of Trade Building, Toronto. Thursday, August 10th, 2 p.m.

ANNUAL CONVENTION CANADIAN MANUFACTURERS' ASSOCIATION, Chateau Frontenac, Quebec. September 18–20.

Executive Council

JUNE MEETING

Success of British Excursion—Preparations for Quebec Convention—Revision of Railway Contracts, Traffic Forms, etc.—Freight Classification Question to be Further Considered—Insurance Department for Montreal Branch—Membership has passed the 1800 mark.

The regular monthly meeting of the Executive Council was held in the Council Chamber, Board of Trade Building, at 2 p.m. June 15th.

In the absence of the Chief Executive Officers of the Association, Mr. George Booth was elected Chairman.

Members of the Council present were:—Messrs. Geo. Booth, Toronto; Robt. Crean, Toronto; P. W. Ellis, Toronto; J. F. Ellis, Toronto; Geo. D. Forbes, Hespeler, Ont.; W. P. Gundy, Toronto; J. Hewton, Kingston, Ont.; R. McLaughlin, Oshawa, Ont.; Jas. P. Murray, Toronto; F. B. Polson, Toronto; J. A. Publow, Hamilton, Ont.; Thos. Roden, Toronto; A. F. Rutter, Toronto; Alex. Saunders, Goderich, Ont.; W. B. Tindall, Toronto; C. H. R. Warnock, Galt, Ont.; J. T. Sheridan, Toronto.

Minutes of the previous meeting, as published in INDUSTRIAL CANADA, were taken as read.

Communications.

Communications were received as follows:—

(1) From the following members unable to be present:—Messrs. J. O. Thorn, A. W. White, J. J. McGill.

(2) Marconigram from Mr. W. K. George sending greetings from the party on board the "Victorian" when off Cape Race on June 12th.

(3) From the Assistant Secretary, J. F. M. Stewart, advising by telegram that the first clause of the Union Label Bill had been defeated by the Banking and Commerce Committee of the Senate.

The reports of Officers and Committees were then presented as follows:—

Assistant Secretary.

The Assistant Secretary reported on the general work of the Association during the past month. He announced the departure of the British Excursion party on board the "Victorian" on June 9th. The following members of the Executive Committee were of the party:—Messrs. W. K. George, Toronto; C. C. Ballantyne, Montreal; Geo. E. Amyot, Quebec; John Hendry, Vancouver; J. D. Flavelle, Lindsay; W. M. Gartshore, London; Lloyd Harris, Brantford; H. W. Fleury, Aurora; R. L. Torrance, Guelph; P. H. Burton, Toronto; S. M. Wickett, Toronto; R. C. Wilkins, Montreal; J. D. Rolland, Montreal; D. T. McIntosh, Toronto.

Treasurer.

The Treasurer presented a statement showing the finances of the Association up to May 31st.

Trade Index Committee.

The Trade Index Committee reported that two meetings had been held and that it had been decided that the 1906 Canadian Trade Index would follow the general style of the 1903 edition, and that 10,000 copies would be printed, 7,000 to be bound in paper and 3,000 in cloth. Considerable information for publication in the Index had already been received, and representatives of the Association were calling on members regarding advertising.

Convention Arrangements Committee.

The report of the Convention Arrangements Committee was presented by Mr. A. S. Rogers, and dealt with several features of the Quebec Convention to be held September 18, 19, 20, 1905.

It was decided that the programme of last year should be changed by trying to have all the section meetings of the Association held on the first day of the Convention, viz., September 18th, in order to give an extra half day for the general business of the Association. Arrangements have already been made for receiving nominations for next year's officers and committees and for extending invitations to such representative men as the Association is desirous of having present at the Convention proceedings.

Reception and Membership Committee.

The Reception and Membership Committee recommended for acceptance 29 applications for membership, the names of which are given in another column.

The Committee also reported that everything in connection with the British Excursion up to the present time had been very successful, and that the Association had already received a payment of more than sufficient to defray the expenditure incurred.

Finance Committee.

The report of the Finance Committee, presented by Mr. W. P. Gundy, recommended for payment Association accounts up to June 14th, 1905.

"Industrial Canada" Committee.

INDUSTRIAL CANADA report announced the issue of the special British Excursion number, and its distribution in Great Britain and in Canada. They also reported that arrangements had been made with the Trade Index Committee, whereby Messrs. G. M. Murray, the Editor, and B. L. Anderson, the Advertising Manager of INDUSTRIAL CANADA, were taking charge of the advertising of the Canadian Trade Index.

Railway and Transportation Committee.

The report of the Railway and Transportation Committee was presented by Mr. W. P. Gundy, and appears in another column in this issue.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by the Chairman, Mr. F. B. Polson, and is published in another column.

Insurance Committee.

The report of the Insurance Committee was presented by Mr. J. P. Murray, the Vice-Chairman. This report is published in another column of this issue.

Montreal Branch.

The report of the Montreal Branch was read by the acting Secretary, Mr. G. M. Murray.

A recommendation in the same regarding the appointment of a permanent insurance representative in Montreal was referred to the Fire Insurance Committee. This report is published in another column.

Toronto Branch.

This report was presented by Mr. W. B. Tindall, as follows:

A meeting of the Executive of the Toronto Branch was held in the City Hall on Wednesday, May 31st, at which 13 members were present.

The Chairman, on behalf of the Branch, presented a request that the Board of Control should recommend to the Council that machinery should be exempt from all taxes except school taxes for the present year. The matter was not decided by the Board of Control as there was not a full meeting, but the assurance was given that a decision would be arrived at at an early date.

(NOTE.—Since the presentation of this report the Board of Control have recommended the Council to comply with the request, and a By-law has been passed making the same effective.)

RAILWAY AND TRANSPORTATION COMMITTEE.

The Committee held its regular monthly meeting on the 14th of June. The following is a report of the subjects dealt with:—

Railway Traffic Forms and Contracts.

A conference between the representatives of the railways and Board of Railway Commissioners, at which this Association is also to be represented, is expected to be held within the month. The Manager of Transportation, as instructed, is reviewing the various forms of contract and other traffic forms for the purpose of making representations to the Board, looking to the prevention of undue limitation of liability and unreasonable conditions and stipulations in these forms.

Canadian Freight Classification.

The Manager of Transportation reported that he had applied to the Board of Railway Commissioners to have this matter reopened and further considered, with particular reference to the rules embodied in Canadian Freight Classification No. 12. This in pursuance of the understanding reached at Toronto during the sitting of the Board in June, 1904, when the classification received temporary approval. The objections of the Association refer especially to the rules respecting mixed carloads, articles requiring platform cars for carriage, freight carried at owner's risk and released, penalty for mis-classification and small charges.

Demurrage.

The railways have intimated that they will be prepared this month to make definite proposals respecting the revision of the rules governing demurrage charges. It is probable that a joint committee will be appointed to prepare revised rules. The Car Service Department of Canadian railways is also expected to be reorganized.

Interchange Switching.

The question of inter-switching between railways at terminal points is now before the Board of Railway Commissioners. An application for inter-switching at London, Ont., was partially heard this month. The Board has intimated that the necessary facilities must be provided, and the only matter which remains to be determined is the question of compensation, which will be dealt with on the 20th inst. The Board also sat at Lindsay on the 12th inst. for the purpose of hearing an application for inter-switching at that point. The Manager of Transportation Department attended this sitting in the interests of the manufacturers owing to an understanding that the interested railway would oppose the application. This attitude, however, was abandoned, and the only question now before the Board for decision is the location of the interchange track and compensation. The Board reserved decision on these points, but intimated that their decision in the London case would directly bear upon the other.

Rates to New Brunswick Points.

Complaint was made on behalf of New Brunswick members of the absence of through rates from stations on the Intercolonial to points on the Canadian Pacific Railway. This has resulted in a conference between the traffic officials of the interested railways, and it is expected through rates will, in consequence, be provided.

Rates on Woollen Goods.

On complaint of interested manufacturers the department has taken up with the railways the question of cancellation of certain special rates formerly granted on woollen goods.

Through Bills of Lading.

The attention of the department has been called to refusal of Canadian railways to provide through bills of lading for shipments from Eastern Canada to the Yukon Territory. The matter is now in correspondence with the interested railways.

The British Columbia cedar case and metallic shingle case were also discussed.

INSURANCE COMMITTEE

Since the last meeting of the Council, the time of the Insurance Department has been occupied to a large extent in arranging and re-arranging the insurance for members whose risks had been inspected during the preceding months, and under which the benefits have still to a large extent to accrue. We have, however, received instructions to place insurance to the amount of $407,500 at the various expiring dates of existing insurances, and the results of the month's work will therefore appear in due time.

During the month we have dealt with the insurances of eight members representing an aggregate amount of $867,845; since organization we have dealt with 63 members, whose aggregate insurance has been $5,040,775.

We have also adjusted one fire loss, and another involving a somewhat serious question is now having attention.

As mentioned in the last report, a circular letter and pamphlet, showing the purposes and objects of the Department, and recording the scale of charges adopted at the last meeting, have been printed and will be distributed to the members within a few days. Copies of both circular and pamphlet are attached hereto.

The Manager was present at the meeting of the Council of the Montreal Branch on Thursday the 8th inst., when the work of the Department was reported upon and discussed. The Branch passed a resolution requesting the Executive Council to arrange for the opening of a regular office of the Insurance Department in Montreal, and the Committee suggests that that resolution be referred to them for consideration and report.

PARLIAMENTARY COMMITTEE

The regular monthly meeting of the Parliamentary Committee was held on June 12th, 1905. The following matters of importance were dealt with:—

Tax on Travellers.

The general question of tax on commercial travellers such as imposed in British Columbia and Prince Edward Island, is being enquired into for the purpose of taking steps to have such taxes, which are a hindrance to inter-provincial trade, abolished.

Dominion Telephone Committee.

A letter from Sir William Mulock asking for the views of the Association regarding Canadian Telephone Systems was forwarded to the different branches of the Association for their opinions, on receipt of which a report will be prepared and forwarded to Sir William Mulock.

Niagara Falls Power.

From Mr. J. P. Murray regarding water power at Niagara Falls. Mr. Murray pointed out the activity of power companies on the United States side of Niagara Falls. He was of the opinion that if the different companies went on with the work that serious results would follow, as they must necessarily take much water from the Canadian side. This matter has been brought to the attention of the Canadian Deep Waterways Commission.

An Act to Regulate Stationary Engineers.

The Secretary reported that the Committee appointed to oppose this legislation appeared before a Select Committee of the Legislature on May 12th last and were successful in having the Bill thrown out.

Exemption From Taxes on Machinery.

It was brought to the attention of the meeting that following the recommendations made from the Parliamentary Committee and the Toronto Branch, legislation had been passed allowing municipalities to continue exemptions on machinery for one year.

Insolvency Legislation.

The Secretary was asked to procure copies of the Insolvency Act of Quebec and other Provinces for the purpose of noting some

of the more important differences in them, in order that the question of a uniform insolvency law may be kept before the business people of Canada.

Extra-Provincial Legislation.

The suggestion of the Committee to have the question of extra-Provincial Legislation as a topic to be considered at a conference between the Quebec and Ontario Legislatures has been put before the Premier of Ontario, but up to the time of the meeting no information had been received regarding what action would be taken.

Incorporated Company Franchise.

At the present time an incorporated company has no vote and has no means of expressing its wishes either in elections to Parliament, to the Municipal Council or on money by-laws. The Parliamentary Committee were of the opinion that this was not an equitable condition of affairs and the Secretary was asked to correspond with the Premier of the Province to see what steps it would be necessary to take to give incorporated companies the privileges mentioned. The Secretary was also asked to call on the Premier personally and offer the services of the Association herein.

TARIFF COMMITTEE.

The report of the Tariff Committee was presented by Mr. J. F. Ellis, as follows:—

In view of the decision of the Dominion Government to appoint a Tariff Commission to enter upon a general revision of the tariff it was decided to officially notify the members of the Association and to ask them to inform the Association of any changes which they believed to be absolutely necessary. The intention of the Tariff Committee was that the different requests should be considered by different sections of the Association, and where possible unanimous recommendations prepared for presentation to the Commission. Replies to this circular have been coming in freely and a number of sections will be called together at an early date.

Canadian and Australian Relations.

A communication from Mr. Richard H. Alexander, Chairman of the British Columbia Branch, urging the Association to memorialize the Government to take steps towards establishing a mutual preferential tariff between Canada and Australia, was carefully considered, and it was unanimously decided to recommend that the Association request the Dominion Government to open negotiations with Australia with this end in view. It was thought that such an arrangement would be of particular advantage to British Columbia and Western Canada, and would be of great assistance in the development of Imperial and Preferential Tariffs.

The Dumping Clause.

A number of the members of the Association have been complaining from time to time that goods of German, French and other foreign origin were being imported into Canada from Great Britain and thereby defeating the objects of both the Dumping Clause and the Preferential Tariff. As a partial remedy it is recommended that the Government should extend its system of Customs Inspectors by appointing one or more to the United Kingdom, these inspectors to have similar duties to the inspectors now located in New York and elsewhere.

MONTREAL BRANCH.

The regular monthly meeting of the Executive Committee of the Montreal Branch was held on June 8th with the Chairman, Mr. Jno. J. McGill, presiding.

The Secretary reported that according to instructions, he had visited Quebec on May 16th to look after a number of matters in connection with the Association. He found that the Perrault Bill to regulate working hours had been killed in Committee, and that the Lafontaine Bill laying down ten hours as the working day limit in an establishment where steam was employed as the motive power, would likely meet with the same fate. He found that there was no need to send a delegation to fight this Bill as it was certain to be defeated when it reached the Upper House, a fact since accomplished.

The advisability of having a branch of the Insurance Department established in Montreal, was considered at length. The opinion seemed to be that it would be well to have an insurance expert constantly at the disposal of the Montreal members, and it was decided to recommend the Executive Council to establish such an office in connection with the Montreal Branch.

It was decided to hold the annual meeting of the Montreal Branch on Thursday, August 24th.

Nine (9) applications for membership were passed.

NEW MEMBERS.

Berlin, Ont.

American Motor Car Co., Ltd.—Automobiles and Gasoline Engines.

Berlin Rubber Mfg. Co., Ltd., The.—Rubber Boots, Shoes, Heels, etc.

Merchants' Rubber Co., Ltd., The.—Rubber Footwear.

Oberholtzer, The G. V. Co., Ltd.—Boots and Shoes.

Snyder, W. H. & Co.—Pianos.

Burlington, Ont.

Burlington Canning Co., Ltd.—Canned Goods, etc.

Galt, Ont.

Todd, Thomas & Son, Ltd.—Feeding Stuffs.

Glencoe, Ont.

Woodburn Milling Co., Ltd., The.—Flour.

Hamilton, Ont.

Hamilton Steel and Iron Co., Ltd.—(R. M. Gilkinson, 3rd Member.)

Kenora, Ont.

Rat Portage Lumber Co., Ltd., The.

Montreal, Que.

Booth Copper Co., Ltd.—(F. P. Miller, 3rd Member).

Cowan, John Co., Ltd.—Ammonia, etc.

Herald Publishing Co., The.—Newspapers.

Librairie Granger Freres.—Publishers and Stationers.

Montreal Rolling Mills Co.—(George Caverhill, 2nd Member).

Montreal Star Publishing Co., Ltd.—Newspaper Publishers.

Northern Electric and Manufacturing Co.—(Lewis B. McFarlane, 2nd Member).

Rattray, J. & Co., Ltd.—Cigars and Tobacco.

Ryall Screw and Specialty Co., The.—Screws, Wire and Sheet Metal, etc.

Ottawa, Ont.

Rideau Mfg. Co., The.—(S. P. Short, 2nd Member).

Owen Sound, Ont.

Eaton Bros. Brewing Co., of Owen Sound, Ltd.—Malt, Ale and Porter.

Penetanguishene, Ont.

Shanahan Carriage Co.—Carriages, Sleighs and Cutters.

Sherbrooke, Que.

Paton Mfg. Co.—(H. T. Heneker, 2nd Member).

Toronto, Ont.

Booth, G. & Son.—Sign Painting, Banners, Decorators, etc.

City Dairy Co., Ltd.—Butter, Neufchatel, Cream Cheese, Ice Cream.

Harris Abattoir Co., Ltd., The.—Dressed Meats.

North-Land Manufacturing Co.—Beef Extract and Beef Products, Pickles, Catsup, Canned Meats, Relishes, etc.

Ontario Felt Co., Ltd.—Yarns for Mittens, etc.

Welland, Ont.

Canadian Barcalo Mfg. Co., Ltd., The.—Brass and Iron Bedsteads and Springs.

ECONOMY OF ISOLATED PLANTS

A paper read before the Canadian Electrical Association Convention, at Montreal, Que., June 23rd, 1905,
by K. L. Aitken, Consulting Engineer, 164 Bay Street, Toronto, Ont.

The first question which presents itself when giving consideration to "Isolated Electric Plants" is the exact meaning of the phrase. At first sight this would appear a very simple matter, but upon going into the question, complications present themselves which tend to confuse and make more difficult an interpretation of the words.

"Central" and "Isolated" Plants.

The "Central Station" according to the general understanding, consists of a power house which supplies energy in an electrical form to a comparatively large number of consumers, whose places of business are widely distributed. The isolated plant is primarily an equipment installed by an individual or company to supply his or its lighting and power circuits. There are, of course, central stations which are laid out on a small scale, and on the other hand, isolated plants exist which are very much larger than even central stations of average size. Such isolated plants may supply energy to a large number of buildings all of which are owned by and are units of one commercial enterprise. Under such conditions the equipment can still be classified under the term "Isolated Plant"; although the amount of power which it supplies and the area distributed over, greatly exceed the energy and distribution of the central stations which can be found in our towns and even cities. Consider that a company has a large factory and has installed therein a complete generating equipment, and that near this factory there is a small concern requiring electrical energy. The larger factory agrees to furnish power to the smaller concern upon either a flat rate or meter basis. Then the question arises, does the large plant, by this action, lose its identity as an isolated equipment, and become a central station? If all the power generated by this plant be consumed within the building which contains the equipment, and one floor or room in this building be rented to some other person or concern than the owner of the building, and power and light be sold to this person or concern, does this action make the equipment a central station?

From the above it will be seen that it is a difficult matter to differentiate between the two classes of equipments—the place where the line should be drawn is not clearly defined. However, so far as this paper is concerned, I am going to deal with the smaller class of isolated plant, which supplies power and light only to the building which contains the equipment, irrespective of the number of individual consumers in such building, and shall consider the economy of such plants in relation to the cost of buying light and power from a local central station. In other words, I shall assume the position of the purchaser of light and power who wishes to ascertain whether or not it would be a paying investment to install a plant of his own.

The information embodied in this paper is based upon reports which I have submitted covering the various phases in which the problem has been presented to me, both in the city of Toronto and in other localities.

Differences of Prices Between Power and Lighting.

People have often come to me and asked, in a very indignant tone, why they have to pay more per kilowatt-hour for their lighting than for their motors; having been informed upon good authority that there is little or no difference between the kinds of electricity supplied for both purposes. For instance, they will be paying three cents for their power, and ten cents for their lighting. This brings forward a phase of the isolated plant question which is really of greater importance than size—I refer to Load Factor. This point I intend to take up later, and will therefore give it but little attention now. As an illustration, however, of the reason for this great difference in prices of light and power, I wish to go over roughly the general condition of things which can be found in almost any central station. Let us presume that a power company has a constant ten hour motor load of one thousand horse-power, and that to carry this load they have boilers, engines, and generators, with a capacity of exactly one thousand horse. Thus, the equipment will be running at full load throughout the entire day, and therefore at its point of highest efficiency. The load output for a ten-hour day will be ten thousand horse-power-hours. Now let us consider the lighting question: presume that this same company supplies to the power consumers a maximum of one thousand horse-power for lighting. This means that the equipment for supplying this energy must have a capacity of one thousand horse-power, but the experience has been that this load is carried on the average not more than two hundred hours per year. As this season will be in the fall, winter, and spring of the year, we can assume that this load is distributed over approximately one hundred and fifty days, or is carried on an average an hour and twenty minutes per diem. This means that the daily output of this thousand horse-power lighting plant is only thirteen hundred horse-power-hours. Summing the matter, we have two equipments, each of one thousand horse-power capacity, one supplying ten thousand horse-power-hours per day, and the other only thirteen hundred. Therefore, it is not difficult to understand from the foregoing why the energy for power will cost three cents, and the energy for lighting ten cents. If we assume that the above prices are per horse-power-hour for the sake of argument—they are really per kilowatt-hour—we find that the income per day for power is $300 and the income for light is $130, and this latter only for one hundred and fifty days per year. If we average this lighting figure for the whole year, we find that the daily income is in the neighborhood of $65, which certainly contrasts very unfavorably with the $300 daily income from the power equipment. While the interest, depreciation and insurance—or constant items—will be the same for both plants, the coal, labor, water, oil, etc.—or variable items—will be reduced in the case of the lighting generators, but not nearly in the proportion by which the output of such generators is reduced. Upon going into the matter very fully we find that the relative figures of three cents and ten cents are very close to what they should be.

Uneconomical Plants.

From time to time, I have had occasion to visit people who have isolated plants, and in reply to my inquiries have been informed that the operation of the plants is very satisfactory Upon endeavoring to obtain further information concerning the actual cost of operation, I have been advised that the installation of the plant has made a very material saving over the cost of electrical energy as it was purchased from the local central station. These matters have always interested me, and in several instances I have gone into the propositions simply to get information for my own use, and I must say that the results have been surprising. One of my friends advised me that by installing his plant he had not actually decreased the cost of his lighting and power, nor had he increased the item, but that with his plant installed he was using about double the amount of energy, without additional cost. I went into this particular case very carefully, and ascertained that the statement pertaining to the doubled consumption was quite correct, but I found that the cost per kilowatt-hour for the plant was over eight cents, whereas the price paid to the local power company had been six cents.

To be quite frank, I have found very few plants which fulfil my understanding of the word economical, and in every case the owners of such plants had told me that the installation had proved a decided success. All this leads me to draw certain definite conclusions, namely, that where uneconomical plants have

been installed, the owners know that a mistake has been made, and are not willing to admit it, or else, they have no idea whatever of the many items which must be charged against the operation of a plant.

Load Factor—Its Influence on Costs.

Boilers, engines, piping, condensers, generators, building, heating, etc., etc., are all important features in the economical operation of any equipment, and must not be lost sight of; but over and above all else stands the one item of Load Factor.

The best condition is to be found in a manufacturing establishment, having an all-day power load which is fairly steady, and a lighting load which is small in comparison with the power required. Of course, if the lighting could be eliminated entirely, the load would be an ideal one, but such a condition is seldom found. Were this the case, the average economy of isolated plants could be materially increased.

Where the amount of energy required by lights is large compared to that taken by motors, the plant must have a capacity sufficient to handle the combination of the two, and therefore the load factor of the system will be low, and the daily output in kilowatt-hours will be very much less than the possible all-day full-load output. In contrast with that which I have designated as the best condition, we find the worst in hotels and apartment houses. Here the service must be for twenty-four hours, and for about eighteen hours of this period the load on the plant will not average more than five to ten per cent. of the rated capacity. It is this low load operation that is responsible for the poor economy of many of the plants installed to-day. One instance of this is to be found in a certain Toronto plant. Two generators of the same size, each direct connected to an engine, are being run twenty-four hours per day, one to supply lights, and the other a number of elevator and other types of motors. This plant has been very badly laid out, and therefore cannot be taken as a fair example, but I am incorporating some figures taken from it as an illustration of the inefficiency of low load operation. The lighting machine supplies about 1,925 kilowatt-hours per week, and the power machine about 385, or approximately 20 per cent. of the energy used for light. On actual test of this equipment, I found that the coal consumption of the power machine was about 60 per cent. of that of the lighting machine. I might say in connection with this plant that both machines are running very much under their rated loads, the average for the lighting machine being 29 per cent. and for the power machine only 5.8 per cent. The power machine carries a normal load of but a few horse-power, but when the two elevators, which it supplies, happen to start at the same instant, the kick runs up as high as twenty-five horse-power. With the lighting machine the general conditions are better. For eighteen hours, a load of about 7.5 kilowatts is carried, and for the remaining six hours from 30 to 40 kilowatts. This plant, as I mentioned previously, is badly designed, and besides has a very unsatisfactory load to handle. The combination of the two produces a result far from gratifying to the owners.

In contrast to the above, I wish to bring to your attention an equipment installed in a Toronto factory. There is one 50 kilowatt generator, and this handles both the lighting and power. The possible maximum for lighting amounts to about 15 kilowatts; and for the power we have a total of 80 horse-power of motors, which take from the generator about 15 kilowatts, and give an exceedingly steady load. The lighting load is really very small, the highest consumption yet recorded from this source not exceeding 7 kilowatts, and rarely going so high. Here we have a plant running ten hours per day under a load of but 30 to 40 per cent. of its normal capacity, and while the yearly output is less than one-half of that of the plant previously mentioned, the cost per thousand watt-hours is considerably lower. I ran this plant for almost eleven months, during which time the output was recorded by watt meters, and a careful record was kept of all operating expenses. The total output during this period was about 37,000 kilowatt-hours, and the cost per thousand watt-hours was but a trifle over four cents. The generator is now considerably larger than is actually required, but the total equipment of machinery throughout the building has not yet been installed. When this plant is running up to its full capacity, I am confident that the total operating cost per kilowatt-hour will be lower than three cents.

The foregoing figures are taken from tests of plants in actual operation. In each of these two cases, I figured the operating cost on paper before making the test itself, just to see how close such estimates could be made, and the results were exceedingly satisfactory. The other figures which I am incorporating are estimates concerning plants now being installed, or which are still on paper. However, I am reasonably sure that they are of equal value to those obtained by actual test.

Some time ago, I had charge of a proposition where it was proposed to install a small plant. The size of the generator in this case was 30 kilowatts, but the load factor was so bad that although we have our boiler installed and also have in our employ a fairly well paid engineer, the estimated cost per kilowatt-hour was almost six cents. The proposition was therefore dropped. If sufficient additional power load could have been secured for this equipment (the load is all lighting with the exception of one small elevator motor) the operating cost could have been reduced to below three cents.

Load Factor in Large Plants.

As all the foregoing applies to very small equipments, I wish to present figures concerning larger plants, to show that the feature of load factor applies in such cases also. There is a general notion that the large plant is inherently a good proposition, it being possible to employ higher grade men, use more efficient boilers, and possibly run compound condensing engines. While this is perfectly true, if taken generally, still it does not necessarily follow that the large plant will be a paying proposition. The cost of energy per kilowatt-hour will doubtless be less, but at the same time must be considered the fact that if this energy were purchased from the local central station, the large consumption would command a very favorable price.

The first figures which I am going to give pertain to a building which requires a twenty-four hour service, six days per week. For twelve hours on Sunday the entire equipment is closed down. From ten o'clock at night until seven the following morning, the load runs slightly less than 50 kilowatts. From seven in the morning until the evening lighting comes on, the load amounts to 150 kilowatts, and when the lighting is added to this, the total is brought up to between 500 and 600 kilowatts. This total is on for a couple of hours, and gradually falls off until the 50 kilowatt point is reached about ten o'clock. For handling this load three units are to be installed, one 50 kilowatt, one 200 kilowatt, and one 300 kilowatt. Each generator is direct connected, the small machine being operated by a simple high speed automatic engine, while the two other machines are operated by tandem compound high speed corliss valve engines. All three machines may be run either condensing or non-condensing, depending upon the season, and the amount of exhaust steam required for heating the building. The boiler equipment will probably consist of four 200 horse-power units, either of the internally fired, or water tube type.

The load factor of the plant can hardly be termed very good, but still the operating cost is not excessive. For a yearly output of approximately one million kilowatt-hours, the cost per thousand watt-hours will not exceed two cents, and may be a trifle lower than this.

I have one more plant upon which I wish to present figures, and its load is of a peculiar nature. For twelve hours per day, every day in the year, it carries a full load of four hundred kilowatts. There are two 200 kilowatt generators, each direct connected to a tandem compound high speed corliss valve condensing

engine, and besides this there is a third unit of 200 kilowatts capacity as a spare. Two 300 horse-power water tube boilers, carrying a pressure of 150 pounds, will supply the two running units, and there will also be a third boiler of 300 horse-power as a spare. The engines will always run condensing.

I have taken up roughly the question of superheating the steam for this plant, but at the present time, am not prepared to make comment on this feature. However, it is doubtful if superheating be employed for any other purpose than to supply the engines with perfectly dry steam, and for this purpose a small percentage of superheat will be sufficient.

The annual output of this plant will be about one and three-quarter million kilowatt-hours, and the cost per thousand watt-hours approximately one and three-quarter cents. In spite of the very favorable load factor, the cost of operating is not as low as might be expected, when comparison is made with the figures given for the previously mentioned plant of large size; but in the former case, a large volume of exhaust steam is required for heating, and this estimated heating expense is deducted from the gross operating cost of the plant; and also there are no spare units installed. In the latter case, it is of the utmost importance that continuity of service be maintained, and this has led to the installation of 50 per cent. reserve capacity. And besides, there is no heating whatever in connection with the equipment.

Exhaust Steam for Heating.

This heating question is a very interesting one, and it is quite possible that in the future steam distributing systems will be installed in our Canadian cities, on the same scale that the idea has been adopted in the States. While running condensing means a very material saving in plant operation cost, still the revenue which can be obtained from the sale of exhaust steam for heating purposes will readily effect a much greater economy. In scattered districts this method of heating is not very desirable, but where the power house is in a congested district the question of going into the steam heating business is very worthy of consideration.

Reserve Units in Isolated Plants.

The installation of reserve units in isolated plants is a problem requiring much study and experience, for the greater the unused capacity of the plant, the lower will be the economy. In a recent installation outside the city of Toronto, the steady power load amounts to 20 kilowatts, and the lighting load to 30 kilowatts. To take care of this, two units have been installed, one a 25 kilowatt machine, and the other a 35 kilowatt. To carry the combined lighting and power loads, both machines will be required, but in the event of an accident to either unit, the majority of the motors can be kept in operation by either generator, and therefore such an accident will not mean a complete shutdown. This arrangement is one which will have fairly good efficiency, and will minimize the chances of a complete closing of the factory.

Savings in Distributing Costs.

In an isolated plant, the cost of distributing is generally very much less than in the case of a central station, and therefore such a plant has one very favorable feature on its side, when considering the question of comparative prices. I might say at this point that the figures of costs which have been given in this paper are costs at the switchboard, and that no consideration has been given to distributing, it being assumed that the cost of distribution would be the same whether power were made or bought.

In summing the isolated plant question, I would say that many equipments have been installed which really have not deserved more than passing consideration, and on the other hand, there are many situations where a private plant would mean a material saving. Load factor is the item requiring greatest consideration, and it is safe to say that wherever this is in any way favorable, the installation of a private plant will effect a material saving over the cost of purchasing energy from a steam driven central station.

WINNIPEG AS A MANUFACTURING CENTRE.

The Winnipeg Branch of the Manufacturers' Association have started a campaign to make Winnipeg attractive to manufacturers who may wish to locate in Western Canada and in their efforts they have the support of the entire business community. It is impossible to grant bonuses in Manitoba, and this is approved of by all, but much can be accomplished in devising a fairer method of municipal taxation. The present Business Tax Law is acknowledged by every one to be a mistake. It was all right years ago, but conditions have changed and the city legislators are convinced that it should be revised. It is expected that, at the next meeting of the Legislature, the city charter will be amended so as to make manufacturers the lowest taxed, instead of as at present, the highest.

The power question is also being pushed and all are hoping that the Council will find a way to obtain power at the cheapest possible rate, from some of the water powers on the Winnipeg River. If this is obtained the people of Winnipeg believe that their city will maintain for all time the commanding position it has at present as a distributing centre.

SMELTING BY ELECTRICITY.

The Dominion Government has appropriated $15,000 for making experiments with the electric process of smelting ores and manufacturing steel at Sault Ste. Marie, and the Consolidated Lake Superior Power Co. will furnish a building and dynamo capable of supplying 400 electric horse-power for four months free of charge. All kinds of ores will be experimented with, and important results are expected to be obtained. It can easily be seen what enormous possibilities for Canada underlie the inauguration of a cheaper process for manufacturing pig iron and steel than is now in use. Ontario is dotted with extensive ore bodies, the development of which is at present prevented by lack of cheap fuel. There is coal in abundance in the eastern and western parts of Canada, but the cost of conveying it to points where coke is needed for smelting purposes is prohibitive. On the other hand, there are a great many waterpowers throughout the Province of Ontario where electricity can be developed and utilized. If the electric system proves to be commercially feasible, we may look for the inflow of a large amount of capital and considerable mining development.—*Hardware and Metal.*

SUPERIORITY OF CANADIAN GLOVES.

"Canadian gloves, in common with almost every other line of goods manufactured in Canada," says an exchange, "are steadily pushing to the front. Nearly all the standard lines, both in fine and heavy goods, are manufactured here, and are receiving a steadily growing demand. In the matter of heavy gloves and mitts for lumbermen, farmers, railroaders, etc., Canada has very few equals, and no superiors. That Canada satisfies such a large percentage of the home demand is owing no less to excellence of workmanship than to superior facilities for looking after this branch of trade. In the finer lines, such as mochas and suedes, Canadian manufacturers are producing goods that defy competition, and that are winning for themselves a constantly increasing popularity."

Winnipeg Representative Wanted.

A firm manufacturing high class hardwood veneer doors wishes to be represented by a reliable and energetic Builders' Supplies House of Winnipeg. Apply to Canadian Manufacturers' Association.

Manager Wanted.

A Canadian wire nail manufacturing company requires the services of a competent Works Manager. He must be thoroughly conversant with wire drawing and nailmaking and understand the management and direction of workmen. Good references required. Apply stating experience to Canadian Manufacturers' Association (Incorporated).

Insurance Department

WHAT CAN BE DONE TO LIGHTEN THE BURDEN OF OUR INSURANCE TAX?

This is a question that is not only agitating our own members, but is engaging the serious thought and attention of manufacturers all over the continent.

The annual Fire Insurance premium forms a constituent part of the actual cost of production and must be considered in relation thereto with as full, close and constant examination as any or all of the other items entering into "factory cost." This particular item of the general expense account, has been on the ascending scale for some years, and it has come to be regarded as a serious and burdensome, if not oppressive tax; it is little wonder, therefore, that more attention than at any previous time is now being given to the question propounded at the head of this article.

The Insurance Department of the Association has reached the definite and distinct conclusion that its mission, at present, is to solve this problem in specific cases for individual members. It is manifest that the time has not arrived when it should deal with the subject in its relation to any particular class of manufacturing industry, or to make any effort to formulate plans with a view to securing a general reduction in rates. The record of the past, and the present condition of the Fire Insurance business, alike demonstrate the undesirability of wasting time in an effort that is extremely unlikely to meet with recognition at the hands of those who regulate rates and terms.

Having reached this conclusion, the question naturally arises, what can the Insurance Department do in individual cases to justify its existence?

The answer to this question is found in the pamphlet issued by the Department to the members last month. If perchance this pamphlet has escaped attention, it is suggested that it be taken up and perused carefully; if it has gone astray and is not accessible, a copy will be mailed on application.

DOMINION FIRE PROTECTION ASSOCIATION.

The next most important consideration to the improvement in the physical condition of a risk, (as referred to in this column of May number) is the use of modern appliances in the protection of a risk. By the adoption of modern and adequate fire fighting appliances, rates are immediately reduced, the probability of destructive fire loss is diminished, the fire waste of the country lessened and thereby the economic condition so much improved. The Insurance Department welcomes the institution of any organization having for its purpose the dissemination of knowledge that will advance the science of diminishing fires and fire hazards and that will educate the public in regard to Fire Protection.

A new organization having the aims and objects indicated at the close of last paragraph, has been formed in Canada bearing the name of the Dominion Fire Protection Association, of which Mr. J. A. C. McCuaig, of 27 Wellington Street East, Toronto, is Manager and Secretary. Membership in this Association costs $1.00 per annum.

The Manager of this Department has been honored by election to the Presidency of this Association, and apart from the interest that office naturally induces him to take in the new movement, he heartily endorses its objects and would be glad to see many of the members of our Association give it adherence and support.

Like many other excellent things, the Dominion Fire Protection Association finds its prototype in the neighboring Republic, and if in the course of time it reaches the importance and value of the National Fire Protection Association of the United States, it will be of inestimable advantage to its members and to the Dominion. No organization in the world has done or is doing more to perpetuate and encourage the use of standard reliable apparatus, or to discourage and discredit the trash that is constantly being worked off on the unsuspecting public than the United States Association, and if the new Canadian Association lives up to the ideal set by its prototype, its success is undoubted. At all events, it has our most cordial support and heartiest wish for permanence and ever increasing usefulness.

THE NATIONAL ASSOCIATION OF MANUFACTURERS OF THE UNITED STATES AND ITS FIRE INSURANCE DEPARTMENT.

It will be a source of interest to the members of our Association to be advised of the action of the National Association of Manufacturers of the United States in respect to the important matter of "Fire Insurance."

Since February last, our neighbors to the south have shown a marked interest in the objects, purposes and plans of our Insurance Department, and much correspondence has passed between the two bodies with a view to a fair understanding of the relative positions and duties each was occupying with their respective constituents.

Our own Insurance Department was the first to take tangible form, and in emerging from the chrysalis stage, had of necessity to find its own means of sustenance and its own sphere of usefulness; in other words, it had to work out its own salvation.

At the Tenth Annual Convention of the National Association of Manufacturers, held at Atlanta, May 16th, 1905, due consideration was given to the Insurance question in the light of our own experience and experiments, and the following is taken from the official minutes of the proceedings:—

"For a Fire Insurance Department.

"The following, unanimously approved by the Executive Committee of the Association and moved by Mr. Inglis, Chairman of the Standing Committee on Fire Insurance, was unanimously adopted by the Convention:

"Resolved: 1. That a bureau be organized under the management of the Association to handle insurance for members and advise them about insurance matters.

"2. That ten thousand dollars or as much thereof as may be necessary, be appropriated for the use of this department.

"3. That the management of this bureau be instructed to study and report upon general insurance matters and the advantages and advisability of organizing an insurance company at some time in the future."

The problems that confront our neighbors to the south are along parallel lines to those affecting our own interests in the Dominion, and with two similar departments in our two national organizations, acting in concert, sharing each other's labors and jointly participating in investigations and results thereof, who may limit or circumscribe the advantage each may be to the other or foretell the tremendous importance that may be attained by mutuality of aims, purposes and plans.

At all events, our Association welcomes the action of the National Association in the creation of its Insurance Department; we pledge it our hearty co-operation as we wish for it the fullest measure of success.

*THE METRIC SYSTEM DEFENDED.

Mr. Ch.-Ed. Guillaume, Sub-Director of the International Bureau of Weights and Measures Replies to Mr. Dale's Objections.

Editor INDUSTRIAL CANADA:

The general adoption of the metric system would certainly mark a great step forward in the progress of humanity; such at least, is the opinion of the immense majority of those who have examined the question closely, and the unanimous verdict of those who have seen the system in operation in the countries which have adopted it.

In the first of these classes Mr. Dale forms a notable exception, by placing himself among the ranks of the few but very active opponents of the introduction of the metric system into the United States,—a small group of men who are no doubt sincere, but whose misfortune it is to be insufficiently informed, and to base their reasoning upon documents accumulated without critical examination.

It would be a long, if not a difficult task, to refute one by one the accusations which Mr. Dale has again brought against the metric system in the April number of your excellent review; moreover, the greater part of these objections, which are not new, have been fully answered in the previous publications of the group of men represented by Mr. Dale, in the "Electrical World," and other periodicals. I will confine myself, therefore, to one of his statements,—one which is very typical and very precise, and which relates to a question so intimately connected with the work entrusted to the International Bureau of Weights and Measures, that it almost becomes the duty of an officer of that Bureau to set things in their true light, in order to prevent the public from accepting as sound an opinion which is at variance with the actual facts.

Mr. Dale contrasts (page 549) the stability of the British standards with the instability of the metric standards. Now, as we shall see later, all these arguments would be much nearer the truth if we transposed them from one side to the other.

It never was the intention of the originators of the metric system to accept the earth as their standard of measurement. The metric standard, it is true, has been deduced from the dimensions of the earth, and the metre was at first equally defined as being either the ten-millionth part of the quarter of the terrestrial meridian, or as equal to the length (at the temperature of melting ice) of the metre in the Archives of France; but, in practice, the latter has become the only material representative of the length of the metre to which all other units of measurement have subsequently been co-ordinated. If, as a result of the report of the Metric Commission in 1872, it was abandoned, it was not, as Mr. Dale says, because it had suffered deterioration, but simply because, constructed at a time when the one-hundredth part of a millimetre constituted the limit of precision for the best measures, it was thought sufficient to give it a form and a finish such that it might guarantee with certainty a measure possessing that degree of precision, and modern experiments have shown that it certainly made it possible even then to obtain something better.

But science is constantly progressing, and a precision which was more than sufficient at one time, becomes insufficient a century later. That is why a new metre was made, and why its form and the manner of its definition were chosen in such a way as to permit, for the future, of an exactness which could not be realized by the metre in the Archives. Its length was fixed in conformity with that of the metre in the Archives, with as much exactness as it was possible to obtain—an exactness certainly equal, if not superior, to that of all the old measures. It is this new metre—of which more than thirty reproductions of pure platiniridium were distributed among the countries which signed the Metric Convention in 1889—that is the fundamental standard of the metric system.

Let us now compare with these facts—not for the purpose of criticizing, but simply in order to reply to Mr. Dale—the history of the standard which forms the foundation of the British system. A law of June 18, 1824, established the length of the yard in relation to the standard constructed by Bird in 1760. This same law provided that if the yard were lost or destroyed, its length should be redetermined as a function of that of the second's pendulum oscillating at London. Now in 1834, the fundamental standard was ruined in the fire which destroyed the Houses of Parliament, and, after mature discussion, the scientific commission appointed to reconstruct it decided to disregard the second definition, known to be inaccurate, and to re-establish the yard from the best known copies of the last standard, which happened to be far from perfect. After labors, the metrological value of which cannot be disputed, the commission established a new yard, which was sanctioned by Act of Parliament on June 30, 1855, and which has since then constituted the Imperial standard.

The new yard, therefore, has been in existence for exactly fifty years, and its equality to the old yard is certainly not nearly as well established as the agreement of the international metre with the metre in the Archives, since the connecting link, so far as the yard is concerned, has been made from copies of an inferior kind.

After this first correlation, certainly not so good as for the metre, we now find ourselves, as Mr. Dale says, in the third stage of the British system, by the construction of a yard made of platiniridium.

What reason could the British Government, upon the advice of its metrologists, have had for desiring to make a standard of this alloy, "the most permanent alloy known," as Mr. Dale says? Why, moreover, has it adopted, not only the material, but also the form of the international metre and of its copies? Why, lastly, has it desired to secure for this work the co-operation of the International Bureau of Weights and Measures? Apparently because, wishing to perfect the yard, it thought it could not do better than imitate what had been done for the metre.

But if the British Government desired perfection, it was because the standard of the yard was not giving perfect satisfaction, and did not permit of absolute security. This, in fact, is the case. The yard sanctioned in 1855 has in its turn been superseded, and has given place to a standard more nearly perfect, just as happened with the metre of the Archives. Now while the latter, made of platinum, can scarcely have varied to any appreciable extent, the Imperial yard made of bronze has, as appears from the experiments of the metrologists, undergone changes, which are revealed by the quite measurable discrepancies between it and the copies of it made in metals which are known to be more stable. Thus, in constructing a new yard, not only was it expected to ensure for the future a stability which the British system did not formerly possess, but the change was made with full knowledge that the new yard differed by an appreciable quantity from the yard of 1855.

We find ourselves, consequently, very far from that absolute continuity of which Mr. Dale speaks with such enthusiasm, and the happy result of which he attributes to the fact that the Imperial standard is confided to the care of the most conservative Government in the world; although, when the British Government wished to ensure for the system which it had inherited from its predecessors a more perfect stability, it could find no better way than to copy in every respect—in material, in form, and in draughted plans,—what had been done previously for the metre; and finally, to secure the perfect execution of this work,

* The April issue of INDUSTRIAL CANADA contained an article by Mr. Samuel S. Dale entitled "A Protest Against the Metric System."—Editor.

it entrusted it to the International Bureau of Weights and Measures.

This decision, which puts an end to instability for the future, does not efface the instability of the past, and in view of what has just been said, we can, at most, only affirm that for the future the British system is in as good condition as is the metric.

But let us look at things a little more closely. At the present moment the new yard is the only one in existence; no copy in platinum-iridium alloy has been made; and we can only hope, according to the promise of Mr. Dale, that copies will be made in the future. With the metre the case is different, as I have pointed out. Thirty copies of pure platiniridium were distributed in 1889 among the countries which signed the Metric Convention. Several additional copies have been made and distributed since then. The metre has been adopted by twenty-two countries. In all these countries, identical copies support its authority, and in case of necessity would serve to verify it. And, in the last place, the metre has behind it a strong international organization, whose efforts are concentrated upon an institution placed at the disposal of the subscribing States, in order to give them, at any time, the value of the standard, in event of its being impaired, in which case it would be sufficient to compare it anew with the international standards. Mr. Dale tells us that a similar organization will be put in operation in favor of the yard. That is possible, but no one will deny that it is worth more, in favor of the metre, to be able to say that it is already in operation.

One word more. Mr. Dale lays great stress on the correspondence between the Russian and British measures. He only forgets two fundamental facts. When the Russian Empire adopted, in 1835, the saschen of seven English feet, the ukase did not fail to state that Russia would have her own standards; but since then the law of 1901 has adopted the arschine (one-third of a saschen), and, abandoning all relation with the British system, announced its dimension in terms of the metre—following in that the initiative, so sharply criticized by Mr. Dale, which Mr. J. C. Mendenhall took, as early as 1893, with respect to the yard in the United States.

What remains now of that universal and permanent unit of measurement of which Mr. Dale speaks? As a matter of fact, the yard standard no longer determines this unit for anything but the British Empire, and the chances are that its present value, as compared to the value of the yard of 1824, shows a much greater variation than will be found between the present metre and the metre of 1799. No metrologist, I believe, will dispute this statement.

May 25th, 1905. Ch.-Ed. Guillaume.

CORRESPONDENCE

Contributions are invited on subjects of general interest, but the Canadian Manufacturers' Association does not hold itself responsible for the opinions expressed by its correspondents.

EDMONTON AND CALGARY.

Editor INDUSTRIAL CANADA:

I have noticed in the May issue of INDUSTRIAL CANADA your interesting note on "The Importance of Canada's Western Markets."

In the absence of explanation, the figures given indicate an importance for Calgary to which it is scarcely entitled. Up to June 30, 1904, Calgary got credit for all imports at any point in Alberta, all other places, such as Edmonton, Strathcona, Lethbridge, McLeod, etc., having been sub-ports of Calgary, and reported to that office, so that the returns given as for Calgary include the returns from all other Alberta offices. For instance, in the item of meats, the value of the imports in which are given as $38,835, it is probable that at least $30,000 of this amount was actually entered at Edmonton, though appearing in Calgary returns.

I find, on investigation, that of the business going to make the Calgary returns, $369,845 was entered at Edmonton. This figure appears small in comparison with returns from the larger places. But to the careful observer it is exceedingly significant. It must be remembered that, for purposes of distribution, Edmonton at present has no railway facilities. Goods are brought in over the branch line from Calgary; but cannot be shipped back to advantage, and until the advent of the C. N. R. a few months hence, Calgary will continue to do the jobbing trade at railway points. Practically the whole of the trade represented by these figures is taken out of Edmonton by teams. Herein is the significance of the figures: what development of trade may be expected when the rich country surrounding Edmonton, and for many hundreds of miles to the north and west, is opened up by the two great transportation companies?

Yours truly, F. T. FISHER,
Edmonton, May 30, 1905. Secy. Board of Trade.

TECHNICAL EDUCATION AND ITS RELATION TO STRIKES AND CRIME.

To the Editor INDUSTRIAL CANADA:

Dear Sir,—In the considerations which are now being given to technical education, may a word be allowed to notice its relation to strikes and crime.

The departments of Governments which have been issuing reports and statistics about criminals, in commenting, refer to their increase in all civilized countries. Exceptions are made of a couple of countries, and a careful examination of cities shows a similar condition as in the excepted countries where attention is given to education.

A frequent cause of crime has been "the strike." Published statistics of the United States give figures for 2½ years ending June 30th, 1904; 180 killed, 1,651 injured and 5,533 arrested, all from strikes. These do not include crimes committed through intoxication of those out on strike, but who may not be aggressive.

It is noticeable that reports show that nearly two-thirds of the killed and injured were non-unionists.

In countries which are well supplied with facilities for educating factory help are to be found the best conditions, and the same in cities which conduct schools for assisting the sons of mechanics, artisans and craftsmen.

The many advantages which were the feature of apprenticeship of by-gone days are greatly missed, and particularly the one of having the apprentice bound to his employer for a term of years.

The freedom with which a learner may, to-day, leave his employment, go out on strike, be subject to the bad example of men idle because of strikes, are conditions to which may be traced the increase in boy criminals. In Canada this increase was represented in the percentage of all convictions, it being 15.80% for 1902, while the average for the years 1887 to 1890 was 14.33%, and that for 1903 15.43% of all convictions.

Another evidence of the harm occasioned by the strike is the increased consumption of liquor.

Steady employment is a sure preventative of crime, and the skilled hands in a factory is the one most steadily employed.

The skilled workman does not find it essential to his success to be a member of a union. The skilled workman is opposed to strikes, he is intent on his work and finds a pleasure in the perfection of it.

The trade school and the technical school, supported by the apprenticeship indenture will amend the increase in our criminal statistics. They will soon relieve the dearth of skilled help for our factories. They will bring a better class of help and a consequent result will be a better product. With better work will come better pay, followed by better homes and a better citizenship. Yours truly, JAS. P. MURRAY.

Transportation Department

RATE DISCRIMINATION.

A remarkable situation has developed in connection with a complaint of discrimination in railway rates on lumber commodities heard by the Board of Railway Commissioners at Vancouver in August last. The complaint which was reported in our October issue, was made on behalf of the lumber and shingle manufacturers on the Pacific Coast, and involved the question of discrimination against cedar commodities and excessive rates thereon from Pacific Coast mills to points in Manitoba and the North-West Territories.

Excessive Rates.

Discrimination was clearly shown to exist, not only as between cedar and other classes of lumber, but also as between localities, both at shipping and receiving points. The rates upon cedar commodities were also shown to be excessive and unreasonable by comparison of the earnings per ton per mile with rates upon similar lumber commodities from mountain mills; with rates upon all classes of lumber from Pacific Coast points to Ontario and Quebec; and with rates on lumber between points in Eastern Canada where no distinction is made between cedar and other classes of lumber. That the discrimination and excessive rates were proven is evidenced by the following extract from the decision of the Board, published in our November issue: "The excess rate of ten cents is, in the judgment and opinion of the Board, an unreasonable and excessive charge upon cedar lumber as compared with the rates upon other lumber which injuriously discriminates against cedar lumber. The Board, therefore, hereby orders, with the powers conferred upon it by sections 253 and 254 of the Railway Act of 1903, that the Canadian Pacific Railway Company, and all other railway companies, do hereafter desist from charging a higher or greater rate of freight upon cedar lumber than is charged by them on pine, fir, spruce and other lumber of like class."

Railway Attitude.

At first the railway announced that it would interpret the order of the Board as being applicable only to that portion of the line which it admitted was subject to the jurisdiction of the Board of Railway Commissioners. Subsequently, as no action appeared to have been taken by the railway to reduce the excessive rates charged upon cedar, the matter was again brought to the notice of the Board of Railway Commissioners who called the attention of the railway to the terms of their order. Thereupon, the railway intimated that if complainants pressed for enforcement of the order they would undertake to remove the discrimination against cedar by increasing the rates on all classes of lumber other than cedar and then bringing down the rates upon cedar to the increased basis. The effect of this action would be to cause a greater hardship than that at present existing, for the reason that of the total shipments of lumber commodities from Pacific Coast points to the territory involved, cedar represents only about seven per cent., so that any increase in freight rates upon the other commodities would in the aggregate amount to many thousands of dollars in excess of what the shippers are now paying, even under the discriminatory conditions. This is well known to the railway, which has intimated to the Board that the lumber interests that would be affected by the charge are much averse to the suggestion and state it would be more injurious than to allow the present rates to stand as they are. In other words, therefore, the railway intimates that it will convert an order issued by the Board of Railway Commissioners, and which was undoubtedly intended to afford relief to the lumber manufacturing interests of British Columbia, into a weapon with which to punish these manufacturers who were bold enough to dispute the reasonableness of the railway rates and complain of the discrimination to which they were being subjected.

Position of Lumber Industry.

The lumber milling industry on the Pacific Coast, as is well known, is in anything but a flourishing condition. A number of mills have been closed down and others are considering the advisability of this step. This makes it difficult to understand the threatened action of the railway which, if carried into effect, will undoubtedly act as a further check upon the development of the British Columbia industry. It would seem to be a matter of paramount importance to the railway to do everything possible to assist in the development of this industry. Another feature of the case well worthy of consideration by the railway is the effect of an increase in freight rate upon the prices paid for lumber by the settlers of the West. On numerous occasions the railway has publicly announced that it is deeply interested in seeing that the settlers in Manitoba and the North-West are supplied with lumber and other building materials on the most favorable terms. Is an increase in freight rates on lumber calculated to accomplish this commendable object?

Surely here is a situation calling for immediate action by the representatives of the people, both in Parliament and on the Railway Commission. Is a railway, for the construction of which the people have been heavily taxed, and which is chartered to perform a public service, to be permitted to disregard the rights of the people and ignore the order of the court? In the public interest it is imperative that the question of the jurisdiction of the Board of Railway Commissioners over the tariffs and tolls of this railway should be settled once and for all. If the present law does not provide an adequate means for correcting the wrong, then it should be capable of amendment.

FREIGHT CLAIMS—SUGGESTIONS.

Delays and difficulties in the adjustment of freight claims by railways are frequently complained of by shippers everywhere. In a recent interview with the officer in charge of the Freight Claims Department of one of our large railway systems, it was suggested that shippers generally can assist in expediting the settlement of claims by requiring their consignees to observe certain simple rules when difficulties arise. It was pointed out that a great many customers in the country, unacquainted with railway methods, when they receive consignments of freight and observe the goods to be damaged, a shortage from the consignment, or an overcharge in the freight account, instead of communicating with the representative of the railway on the spot, frequently report the occurrence to the shipper, who has then in turn to report it to the railway company. Sometimes before this can be done, it is necessary to again communicate with the consignee. All this takes time, and in many cases, it is said, operates against a prompt adjustment of the claim, because the railway representative has not been given an opportunity to inspect the consignment or vertify the claim of the consignee at the time of delivery, and is therefore not in a position to make a full report of the occurrence to his company. Some large shippers, in order to obviate such difficulties, are said to have adopted a printed form which is enclosed to country customers with invoices. This form

(*Continued on page* 849).

COST ACCOUNTING.

From Mr. Sinclair G. Richardson's Address to Hamilton Manufacturers, June 1st, 1905.

The first idea of a Cost System is to give the manufacturer the actual cost of his product, but another important feature which accompanies it, is the great saving against waste, carelessness, thoughtlessness or neglect on the part of his employees, which is shown up by having a system of this nature.

Of course it must be understood that to have an accurate Cost System will increase the expense of the office or accounting department, though not to a great extent, but with a proper system the results will more than pay for the extra expense, while the ways of saving waste, etc., will show up so clearly that the extra clerical expense will be saved again and again in the factory. The preparing of a system suitable for a certain business can only be made after an examination of the existing system of bookkeeping, as every business has some peculiarities special to itself which have to be considered in the installation of a Cost System.

In most manufacturing concerns costs vary greatly according to the output, and in this way the cost decreases as the output increases, so that the nearer the factory is run to its full capacity, the smaller will be the cost comparatively. Thus it is hard for the individual manufacturer to successfully compete with some of the larger companies which are springing up almost daily. It is, therefore, becoming more and more necessary that the manufacturer, whether on a large or small scale, should have some means of arriving at the actual cost of his product, and not only that, but also a system of comparing that cost from month to month so that he may see as the time goes on, how and where he may reduce that cost without, of course, in any way deteriorating the quality of the product.

In running a Cost System it is of the utmost importance that all material used must be properly charged out from Stores Account to the Special Cost Account of each kind of product. Likewise the labour must be carefully and properly distributed between each variety of product, but the mode of doing this must be arranged according to the nature of the business.

As a general rule the actual material entering into the product, and the direct labor on same, should make up the first cost. This cost should be brought together in such a way as to make a comparative statement, and differences, from month to month, would be taken up with the foreman.

To this would be added the factory burden, such as wages of foremen, lighting, fuel, repairs and maintenance and other direct expenses of manufacture which might be controlled by the foremen. Next comes a share of the indirect or general expense, such as salaries of officers, office salaries and expense, rent, insurance, taxes, depreciation, etc., which would make up the total of the manufacturing cost.

A separate cost sheet should be kept of the cost of selling, which would include the remainder of the above general expense as well as travellers' salaries, commissions, discounts, freights out, interest, reserve for bad debts, etc.

In preparing a monthly cost sheet including all the above expenses, it should show the percentage of cost of each kind of material this month and last month, treating labor and other material and general expense in the same manner, so that the cost of each item can be compared one month against another.

To install a cost system, there are three principal heads under which all the detailed sub-headings come, viz.:—Material, Labor and Burden. These heads should be carried in two sections: Cost of Manufacture and Cost of Selling.

Material.

The material is divided into two sections: raw material, which actually enters into the finished article, and supplies, being that which is used in making the product, such as coal and other supplies.

This material should, as a rule, be charged to Stores, not when paid, but as soon as received, and in order to do this, a form of purchase journal or voucher record should be used. As this material is issued to the different departments of the factory, it must be charged to the department or job number as the case may be, at the same time crediting Stores Account. This enables the stores department to keep a perpetual inventory which is used in preparing the monthly balance sheet.

Thus the material as used is charged to work in progress, and to the special job or department, according to the nature of the business.

In connection with stores, the price at which they are charged in the books, should include freight and duty. In charging them it is well to include the cost of handling them in most cases.

For this purpose a stamp should be used, showing the necessary additions to the invoice price, and also other particulars to prove that the goods were received and prices correct, as well as the accounts to be charged. On receiving the invoice, the Purchasing Department should look up the number and put same on the invoice, which would be proof that the order and invoice have been compared. The terms of payment, date on which goods were received, the price charged, should also be passed on by the purchasing of stores department. The distribution of the charge should also be put on by one who has a thorough knowledge of the work, so that when handed over to the bookkeeper, he has exact costs before him and can charge in the record correctly.

Labor.

The labor must also be distributed in the same manner as the material, and in order to do this, the timekeeper must be very careful to show the special work on which each man is employed. It is also very essential that each workman should have a time card on which he shows the number of hours spent on each job. There are so many varieties of time sheets which must be adapted to each particular business, that it is useless to go fully into the ways of distributing labor for any one class of work, as it is best to arrange the timekeeping to suit the nature of manufacture. This, however, is a very important part in Cost Accounting. In some businesses it calls for very full details, and in some cases requires that the workman's time be kept in fractions of hours. This, of course, has to be arranged according to the nature of the work and business.

Burden.

Burden should be divided into two sections:—(1) Factory Burden, which can be controlled by the foreman, such as repairs, maintenance, supplies, etc., and salaries of foremen, clerks, timekeeper, general and other non-productive labor which varies according to the business; and (2) General Expense, including share of salaries of officers, general office salaries, switching, stable, power, light, heat, and other expense. Many people make an estimate of the percentage of general expense, which in making up estimates is very good, but to run a satisfactory Cost System it is necessary to distribute the actual burden each month against the product of that month. In order to do this, it is necessary to open Reserve Accounts for such charges, as insurance, taxes, water and other licenses and similar items which are not paid monthly. This is done by preparing tables showing the estimated annual charge and charging one-twelfth (1-12) of the amount each month, crediting the Reserve Account.

The distribution of this burden is generally pro-rated on the basis of direct labor of each department or job.

Distribution of Burden.

Suppose the direct labor amounts to $5,000 and burden is $3,000. The burden is 60%.

Divide the direct labor over the different departments or jobs:

	Labor.	Burden.
A.	$ 500.00	$ 300.00
B.	750.00	450.00
C.	250.00	150.00
D.	2,000.00	1,200.00
E.	1,500.00	900.00
	$5,000.00	$3,000.00

To further explain Cost Accounting it is necessary for me to take up one class of business. For instance, I propose, with the assistance of some forms which I have prepared, to try and explain a cost system for a brewery, from the purchasing of the raw material, to the delivery of the finished product.

The starting point of the system must, of course, be the inventory of material and supplies on hand. This can be kept in one general Stores Account, but with a brewery, it would be more preferable to have separate stock accounts for each kind of material, such as malt, hops, grits and other material which goes to make the finished beer; and fuel, brewers' and machinery supplies, ammonia, etc., which are the necessary supplies required in making the product. The inventory would also include the stock of beer on hand, to be valued by estimate as nearly as possible, but this value would be adjusted as required after the first month, when the actual cost of manufacture had been found.

Having proved a correct inventory, the next thing is to have a book in which to charge the further purchases and expenses (Form No. 1) during the month. We shall call this the Purchase and Expense Journal. Each invoice, as received, should be charged in this book, in order that all liabilities will show as incurred, instead of when paid. In this connection, it is necessary that invoices should be received with the goods, rather than only once or twice a month, which is a very common practice here. Invoices as received, should be numbered consecutively and as shown in the form they should be entered: invoice number, date, name, particulars, amount under "Accounts Payable" or ledger accounts. These two columns make up the credit side of the journal, and the accounts payable column is posted monthly in total to that account in the ledger, while the amounts in the ledger accounts column are posted individually. Most of the entries would be in the accounts payable column, and the other column is only used where it is necessary to post direct to the general ledger or for credit invoices.

The other columns of this form are all charges or debits, and are for the distribution of material and supplies purchased, repairs and additions to capital. These columns, with the exceptions of sundries, are posted in total once a month, sundries being only used for such items as cannot be charged in the individual columns, and thus requiring each item to be posted separately.

We must next have some means of showing the material used and our second form called "Brewmaster's Record of Brew and Material" should show daily the gross brew, waste and net brew of each quality; the net brew of all kinds and amount consumed. Further, the amounts purchased, used and sold of each material should be entered each day, and at the end of the month, to the total purchased, should be added the stock at first of the month and the total used and sold is deducted, leaving the balance of stock at end of month of each material. Thus we have an inventory of stock of materials on hand at end of each month, which must, of course, agree with the general ledger accounts.

Having now followed the material from its purchase until it has become beer, the salaries and labor must be distributed between cost of manufacture and cost of selling and delivery. This can easily be done by showing the occupation of each person on the pay roll, but labor on repairs must be shown separately in order to have the percentage of cost of repairs separate on the cost sheets.

The burden or indirect expense must also be shown separately, and in the case of insurance, taxes, license and depreciation, tables should be made up showing the total charges under these heads for the year, one twelfth (1-12) being charged each month. To illustrate this, I have prepared a depreciation table (Form No. 3) from which the idea can be readily understood, showing the capital assets, the percentage of depreciation amount per annum, and monthly charge to cost of manufacture and cost of selling, respectively.

This brings us to the Cost Sheet, so far as Cost of Manufacture (Form No. 4) is concerned, and down the side we have the different materials used, supplies, salaries, labor, insurance, taxes and license, repairs, light, beer consumed in the premises, less grains and sprouts sold, depreciation. The third and fourth columns show the cost of each last month and this month, that is, the total expended in manufacturing, while the first and second columns show the cost per barrel which is found by dividing the total product for the month into the figures in the third and fourth columns.

To show the total product as well as the stock on hand, a Barrelage Statement (Form No. 5) is prepared. This shows the stock on hand at first of month, to which is added the production, less waste. From this total, we deduct the total sales and amount consumed, leaving the stock on hand at end of month.

In this barrelage statement, the production, waste and consumed are taken up in the cost of manufacture section of the cost sheet, while the sales are used in getting the cost per barrel in the cost of selling and delivery.

Cost of Selling (Form No. 6).

The other half of the cost sheet takes care of the cost and delivery. As in the cost of manufacture, the total expenses for the month are charged opposite the different items, with the corresponding figures for the previous month, for comparative purparative purposes in the third column. The cost per barrel is found by dividing the number of barrels sold into the amounts. It is very important that the selling and manufacture costs should be kept distinctly separate, as it would be impossible otherwise to get accurate costs. The amount manufactured and the amount sold always vary according to the season, so that by keeping the two costs separate, a correct cost can be obtained.

Profit and Loss Account (Form No. 7).

The profit and loss account combines the two costs, by charging cost of beer sold at so much per barrel for manufacturing, and so much for selling. Other charges which are not directly chargeable against either cost are also included on the same side; while the total sales, less rebates and special allowances, are entered on the other side, along with any other miscellaneous receipts. The balance between the two sides will represent either profit or loss, but generally in this business, profit, assets, accounts receivable, inventory of beer, materials and supplies, accounts payable and surplus showing profit for current year, less dividends paid.

Along with this goes the statement of profits showing the monthly profits for the current year in comparison with those of the previous year.

This carries the cost system through from start to finish, though there are, of course, some supplementary forms in connection with the sales and pay roll; also in the case of a bottling department, separate cost sheets, which though differing from the other cost sheets already shown, are on very much the same basis.

Travellers Wanted.

A Canadian manufacturing company requires two first-class travellers for Ontario and North-West Territories, respectively. Apply stating experience, etc., to Canadian Manufacturers' Association.

LITERATURE FOR BUSY BUSINESS MEN.

(Books for Review should be sent to the Editor, Industrial Canada, Toronto.)

Industrial Conciliation and Arbitration. By Douglas Knoop, with an introduction by Professor Sydney J. Chapman. King & Son, London, 1905; pp. XXIV., 241. 7s. 6d.

The statement of the eminent English economist, Professor Marshall, of Cambridge, is as true of Canada as of England or the United States. "The present age is a very critical one, full of hope, but also of anxiety. Economic and social forces capable of being turned to good account were never so strong as now, but they have seldom been so uncertain in their operation. Especially is this true of the rapid growth of the power and inclination of the working classes to use political and semi-political machinery for the regulation of industry.

While the wage problem is one of bargain and sale, a fair-rate may be said to be a will-o'-the-wisp. The rate paid is fixed by many influences peculiar to the factory system which dates back for over three-quarters of a century. *Conciliation* is the discussion and settlement of a question by the parties concerned. *Arbitration* is the authoritative settlement by an independent referee. *Meditation* is the hopeful intervention of an outsider. *Collective bargainings* is the process of negotiation as carried on between associations.

The account of legislation in New Zealand is particularly timely. In New Zealand appeals to courts have been frequently instigated by trade competitors. It is wrong to call it as Lloyd does, "a country without strikes." The chief work of the arbitration court has not been so much the maintaining of industrial peace as in improving the conditions of labor. The increase in the cost of living since the awards began to go into effect is variously estimated at from 20 to 40 per cent., though, we may remark, this increase is probably the result of many other influences working along with the courts. With certain exceptions employers are not in favor of compulsory arbitration. On the other hand, the workers are strongly in favor of it, as in the majority of cases, decisions have been favorable to them. The unions have not always proved to be responsible bodies, and for a period of depression prospects are none too rosy.

The conclusions come to are most interesting: "Before industrial peace can come it is absolutely essential that employer and employees should be brought to appreciate as fully as possible the complicated problems of industry. This alone Boards of Conciliation can facilitate. Arbitration cannot educate. . . Compulsory arbitration is worse than useless, for it tends to cultivate a spirit of antagonism between employers and employed. . . No panacea of industrial disputes can be found. But it is possible to do much by building up and consolidating a voluntary system of conciliation and arbitration, in which Trade Boards are given the first place." Such are some of the thoughtful conclusions come to by the Cobden Prizeman of the University of Manchester.

Protection in the United States—A Study of the Origin and Growth of the American Tariff System, and its Economic and Social Influences. By A. Maurice Low. King & Son, London, 1904; pp. VII., 167. 3s. 6d.

This will be found to be a thoroughgoing protectionist's account of the United States tariff. The first session of Congress fixed an average duty of 7½ per cent. By 1800 the average rate was raised to 13 and by 1824 to 37 per cent. "This proved so satisfactory," we are told, "that a still further advance of duties was made in 1828, bringing the average rate. . . to about 45 per cent." Horace Greeley called this "the most protective tariff ever adopted," though had he lived in the time of McKinley and Dingley he would needs have gone to school again.

Noteworthy is it that the United States has enjoyed its greatest prosperity under its highest tariffs, though the South has steadily opposed the high tariff as "the tariff of abominations." From Grover Cleveland's election in 1884 to 1900 electoral campaigns were fought out on tariff issues. In 1890 came the McKinley Act, followed by Cleveland's return to power. But the depression of 1893 was fatal to the Democrats, and in 1897 the Dingley Bill became law. The Dingley Tariff is the high water mark in American tariff history. It is the first, too, which specifically states as one of its purposes "to encourage the industries of the United States."

The author points out the value of the home market, the good effect of high wages on the use of machinery and on the country's wealth generally. He finds no insurmountable difficulties in higher costs of living as "a cheap man never created a high civilization or a strong nation." He looks forward to "the happy stage of scientific progress" which will yet be reached when the tariff will not be the football of politics. If the "legislature exercise its powers wisely, the public," he thinks, "has nothing to fear from trusts; rather it will welcome them."

This little volume should be read, though it leaves untouched the great problem of how far the United States owes its phenomenal prosperity to Providence or to the Republican party.

Canada in the Twentieth Century. By A. G. Bradley. Morang & Co., Toronto, 1905, pp. XII., 428, Map of Canada inserted. $2.00 net.

Mr. Bradley, the author of "Canada in the Twentieth Century," finds himself in a new field when he gets away from "The Fight with France for North America," "The Conquest of Canada," and other valuable historical works and gives his attention to the compilation of a narrative dealing with conditions as he found them in Canada in the summer of 1902. Although living in England he has spent considerable time in Canada, and when he started out to grasp Canada in a short seven months, he was not unfamiliar with his subject. Fortunately such was the case, for Canada has shown itself too big to be handled in print by anyone in a summer's vacation.

Mr. Bradley lands at Quebec and his story ends at Victoria. The amount of information that has been compiled, the breadth of view with which opinions are expressed and the delicate touch in the many descriptions given of Canadian life and scenery make the book quite remarkable. He never tries to be complimentary, while at the same time has abundant faith in the future of Canada. He deals with hard facts and figures, but does not use tables or comparative statistics. They are all part of the narrative, and not conspicuous enough to be tiresome.

The result of very careful observations are found in all parts of the book. For example—"But the Park, (Victoria, B.C.) outside the town, towards the shore line facing the coast of Washington and the high ramparts of the Olympian range, is a matter of very particular pride to Victorians. Now oaks do not grow on the main land in British Columbia, but here on the island the English oak, rugged, solid and venerable, rises from green English looking pasture, and there is a sniff of England such as could not possibly be inhaled in any part of the North American Continent at any season of the year."

"What would puzzle any stranger in Canada is the tolerant contempt with which politics and politicians, with, of course, notable reservations, are spoken of by the mass of the educated class, and yet the reasonably capable manner in which the affairs of the country are somehow or other conducted."

"Bright colored villages sprinkle the waving landscape for miles around Quebec, and the lines of the country roads can be traced far away into the dim distance over hill and dale by the bright glint of the small homesteads which are marshalled so thickly and sociably along them. The benighted folks who dwell therein persist in throwing time and money away on paint and whitewash to an extent that excites the liveliest scorn of the smaller Ontario farmer to whom nature has denied, or his Scottish affinities crushed out, such elementary sense of harmony as is prevalent even among the peasantries of Europe."

Foreign Trade News

Canadian Confectionery in Great Britain.

Great Britain apparently does not use confectionery to the same degree as obtains in Canada. French and American candies are sent in, and I should think that a good trade could be done from Canada in certain preparations such as bulk caramels, chocolates, and general lines of medium and low-priced goods. They are sold in much smaller quantities; still, I think it would pay some of the larger Canadian confectioners to look more closely into this market.—*Canadian Trade Agent, Birmingham.*

Japanese Discrimination.

Recently Mr. Samuel Barker, M.P., of Hamilton, in calling the attention of the Government to the discrimination of Japan against Canadian goods said that the manufacturers met with difficulty in selling their goods in Japan, and after inquiry learned that there was a five per cent. duty in favor of the United States shipments. Then the Canadian shippers reduced their prices in order to counteract the disadvantageous customs regulation. Nevertheless, the Japanese refused to buy the Canadian products, while their agents were scouring the United States for goods. The manufacturers were informed that the Japanese were prejudiced against the Canadians on account of the refusal of Canada to enter into an agreement whereby it would receive the preferential treatment. Mr. Barker said it would be in the interests of Canadians to have Japan more friendly to this country.

Mr. Fielding replied that the reason for the discrimination was the refusal of Canada to join Great Britain in a treaty with Japan when this was proposed some years ago. The Imperial Government gave privileges to Japan, but if Canada became involved in this treaty it would be giving up its legislative freedom. This country would then be found in an embarrassed position later on.

Japan discriminates against Canada not only in her customs regulations, but also through her patent laws. No Canadian can secure a patent in his own name in Japan.

New Zealand's Prosperity.

Although New Zealand has but 850,000 inhabitants or thereabout, her imports and exports summed up in 1904 to approximately $140,000,000, an amount per capita greater probably than that of any other country in the world, Great Britain included. At the same rate Canada's Import and Export Trade should be something over $980,000,000, although in 1904 it was but $458,000,000. A leaflet just issued from the offices of the New Zealand Registrar-General gives some statistical comparisons which indicate something of the splendid progress which is being made in this far away corner of the Empire:—

The population has increased from 686,128 to 857,539; the number of occupied holdings, from 46,676 to 68,680, and the land in cultivation from 10,128,076 to 13,868,074 acres.

A remarkable feature of the live stock figures is the increase in cattle from 964,034 to 1,736,850, while there has been a falling off in sheep from 20,230,829 to 18,280,806.

With the exception of wool, the export of which has dropped from £4,827,016 to £4,673,826, exports show large, and in some instances amazing, advances. Thus the grain export has increased from £226,182 to £392,250, and frozen meat from £1,194,545 to £2,793,599 (a gain of 133.86 per cent.). £251,280 to £1,380,460.

Butter has increased over four-fold, the progress being from

Flax has increased nearly a thousand fold. The figures for flax in the two years are £66,256 and £710,281.

Gold shows an increase from £887,865 to £1,987,501, or 123.85 per cent.

Provisions, tallow, timber, etc., have advanced 80.54 per cent. Although the exports have increased from £9,085,148 to £14,633,272 during the decade, or 61.07 per cent.

The imports have nearly doubled, the figures being £6,788,020 and £13,291,694.

The coal output has increased from 719,546 tons to 1,537,838 tons.

The railway receipts have almost doubled, the increase being from £1,150,852 to £2,209,231.

The bank deposits (average of four quarters) have advanced from £13,927,217 to £19,074,960, and the assets from £17,746,421 to £20,893,096. The number of depositors in savings banks has nearly doubled and the amount to credit has more than doubled, the figures being £4,066,594 to £8,839,307.

The number of policies in force in the Government Insurance Office has increased from 32,907 to 44,194, and the amount insured from £9,232,543 to £11,261,080.

Million Pairs of American Shoes.

According to the official returns of the bureau of statistics, Department of Commerce and Labor, the exports of boots and shoes from the United States for the fiscal year ending June 30, 1903, were 4,197,566 pairs, valued at $6,665,017. It is said that of these over 1,000,000 pairs were sent to Canada.

The Pushful American.

At an assembly of merchants held the other day in London, England, under the auspices of the American Chamber of Commerce, Senator R. W. Best, of the Commonwealth of Australia told his hearers that owing to the superior tenacity and pushfulness of the commercial travellers from America and Germany, the English dealers and manufacturers were being steadily superceded in Australia's trade. Australia, he said, was now buying nearly $128,500,000 worth of goods from the commercial rivals of Great Britain.

Mexican Steamship Service.

An agreement has been arrived at between the Department of Trade and Commerce and Elder, Dempster & Co., whereby the Atlantic Steamship service between the ports of Canada and Mexico will be inaugurated on the 20th of the present month. The agreement provides that the Mexican and Canadian Governments shall each grant a subsidy of $50,000, and it shall be the privilege of the Elder, Dempster Co. to carry freight and passengers from Canada to Cuba and both ways between Cuban and Mexican ports, the only restriction insisted upon by the Mexican Government being that Cuban products shall not be brought to Canada. The sailings, which will be at regular monthly intervals, will be from Halifax in winter and from Montreal in summer, calling at Halifax, Charlottetown, Nassau, Havana, Progresso, Coazacoalcos, Vera Cruz and Tampico. The steamers comprising the service will be first class vessels, classed 100 A1, with accommodation for Saloon and Second Cabin passengers, and special facilities are being made for the careful handling of all classes of cargo.

Mr. Ward, Premier of New Zealand, has expressed his willingness to enter into negotiations with Canada for a further extension of the existing customs preference.

KNOWLEDGE OF THE MEXICAN MARKET.

By A. D. Campbell.

The Mexican market is a peculiar one, and those who would succeed in doing business in it, should first make a careful study of the likes and dislikes, commercial customs and trade requirements of the Mexican people. In fact, so important is this knowledge, that it has always been and will continue to be the dividing line between success and failure for those who would engage in this trade.

Declaration of Goods.

Take for example, the question of declaring goods for entry at the Mexican Customs. Customs officials at Mexican ports are by law entitled to receive one-half of all fines collected on goods "falsely declared." In Canada, false declaration of goods means the representing of one article as something else on which a lesser amount of duty is payable and involves an attempt to defraud the Customs. In Mexico however, it is different, at least in the practice. For reasons that are obvious in view of the disposition of fines money, the most trivial and unintentional deviations from exact classification of goods, the misspelling of a word, or the failure to follow in every small and unimportant detail the customary formulas, will be considered to mean an attempt to defraud, and fines will invariably be imposed and sometimes doubled if not paid within twenty-four hours. Of course there is a Customs junta to which these cases can be referred, but the process of getting redress is exceedingly slow and frequently costs more in the end than the amount of the fine itself.

About Packing.

The difference between profit and loss in a shipment is frequently decided by the manner in which goods are packed. Duty in Mexico is charged by weight, and somethimes under some peculiarity of the tariff law, articles made up of mixed materials (such for instance as iron bedsteads with brass knobs and ornaments) pay a duty when all parts are packed together as if the whole were composed of that particular part on which as a material by itself, the highest duty is chargeable. The brass fittings on the bedstead for example, might weigh five pounds, while the iron part of it might weigh fifty. Because they were packed together, the whole might become dutiable at so much per kilogram as brass fittings, if the duty on this latter happened to be the highest.

But this is only a part of what must be known about packing. When goods are concerned on which heavy duties are payable, and the same is payable on legal or gross weights (*i.e.* on both the article itself and a part or all of its packing as the case may be) the natural desire of the shipper is to pack the goods as lightly as possible, and this is often done without regard to or knowledge of the fact that the goods after leaving the Customs may be destined for some city, town or rural district to which there are no means of transportation except mule train over narrow mountain trails where lightly constructed packing boxes would neither protect the goods sufficiently from tropical rains, etc., nor the smashing and jarring they must receive as the mules brush by trees and projecting rocks or collide with each other as they travel along. To be successful, the Canadian shipper must be forewarned of the transportation and climatic conditions through which his goods must pass, and he must pack his goods with a view as much to these matters as to what is to happen them at the Mexican port of entry. Indeed when the only means of transportation is mule back, as is frequently the case, they cannot be moved at all unless the packages themselves have been made in sizes and weights to suit the capacity of the animal. These are but a few of the points to be known concerning the packing of goods. There are many others.

Trade Marks.

The question of trade marks is another most important one. In many cases it will be found advantageous or even necessary to adopt special trade marks for the Mexican market. English words as trade marks should be avoided, as they convey no meaning to the generality of Spanish speaking people, and are easily forgotten. Nor must too much dependence be placed upon the names of the makers becoming sufficiently well known. Even Spanish translations of word trade marks are seldom successful. They are often idiomatic and entirely lose "point" in translation. In place of word trade marks, it will be found more satisfactory to adopt simple pictorial designs, such for instance as a bird or dragon, a lion's head, an anchor, cross, triangle or anything of like character. The reason for this is that a great deal of the purchasing, especially of goods for household use, is done by Indian servants, and as but few of these can read, they are told in making purchases to mention the trade mark of the article required, and if this is in the form of a picture or design of some kind that can be given a name, the article is easily identified by the Indian and consequently the goods themselves come more readily into general use. All trade marks should be copyrighted as a first step upon entering this market. If the copyrighting is neglected, infringements will be sure to occur, when through the goods becoming popular, the trade marks become valuable. Of course, there is legal redress, but legal proceedings in Mexico should be avoided if possible. They are slow and exceedingly costly.

What the Mexican Wants.

Then again, it is very desirable to be pre-informed of what the Mexican wants, and to appreciate the wisdom of falling in exactly with his views is still more important. His requirements are sometimes peculiar, and his prejudices and preferences often seem absurd, but they are fixed, and the point is that the Canadian trader must find out what these are and conform to them. The manufacturers of Great Britain, who once had the major portion of Mexico's foreign trade and who yet enjoy there a commercial prestige greater than that of any other country, lost much of the business through inability to appreciate this fact, or what is more probable, unwillingness to be guided by it. The Mexican dealer might want a line of knives or machetes which he could retail at say a couple of *pesos* each, although they might be of a kind that would break or wear out within the week. He would write to the English makers for them, who would write him in return, saying that what they would prefer to supply would be an article that he would perhaps have to retail at four *pesos*, but which would last a year or a lifetime. The Mexican would then write the German makers who would promptly supply him with just what he asked for and without question or parley. The Mexican retailer would know and so would the German manufacturer—whether the British maker did or not—that the Mexican Indian who buys such things, would rather pay two *pesos* for his knife, wear it out in a few days and come back for another one like it at the same price, than spend four *pesos* all at once for something even a hundredfold better.

It should not be understood by this that the Mexican buyer always wants low priced inferior goods. He as often requires the best that the world can produce, and is willing to pay accordingly. It is merely that he has to cater to the tastes and fancies of a peculiarly mixed public—the wealthy and intelligent upper class and the stupid and improvident Indians and half-breeds; practically speaking there is no middle class in Mexico. A very large proportion of Mexico's population is composed of these Indians and half-breeds who are very ignorant and suspicious of innovations, and while these are not themselves the buyers of large quantities of foreign goods, they must be reckoned with in that they are the laborers, artisans, and general working people of the country, and that as such they have a considerable amount to say (for they have to be humored) regarding the implements and materials with which they carry out their employers' work.

Success of the U.S.

Besides matters such as have been instanced, there are, of course, a multitude of other things which should be known and taken into account in dealing with the Mexican people. That Great Britain, who formerly led in Mexican trade, lost much to Germany, and that both England and Germany have since been outstripped by the United States, has undoubtedly been due in a large measure to the knowledge that each possessed of the field as well as the willingness of each to be governed by its requirements. Great Britain and her colonies have to-day something like thirteen per cent. of the Mexican trade. France and Germany ten per cent. each, and the United States fifty-eight per cent. Through the splendidly equipped and well organized consular service of the United States, much valuable information is being constantly supplied to the manufacturers and shippers of that country, while the goods of the manufacturers themselves are being sold, not so much as heretofore through commission houses, but by their own travelling representatives, who make that field their exclusive territory and who have a perfect knowledge, not only of the trade needs of the country, but also of the language, customs and business methods of the people.

How to Compete.

As the goods that Canada is best fitted to supply to the Mexican market must come largely into direct competition with similar products of the United States which are already well known and accredited, it will be seen that if Canadian trade with Mexico is to succeed, not only must the Canadian Government representatives in Mexico be as well equipped, competent and alive to the requirements of the situation as are the Government agents of the United States, but the men who are sent to solicit business must be selected from those who know the field. All catalogues, price lists and general advertising matter should be printed in Spanish, and no pains should be spared in securing translations that are in every way first class. The writer's experience of such matters while in Mexico was that not more than one advertisement in ten of those translated from the English conveyed the intent of the advertiser, while many of them were so grotesquely erroneous in style and construction as to do far more harm than good. For several reasons, it will be found most satisfactory to have translations made in Mexico City, principally because really good translations can be secured there at a reasonable cost, and because in Mexico many articles of commerce such as parts of machinery, etc., have names peculiar to that country alone.

Canada's Chance.

That a large volume of lucrative trade can be secured for Canada, there is, however, no doubt, notwithstanding the lead which the United States has already obtained in the Southern Republic. Mexico with her fourteen millions of people requires immense quantities of lumber, fish, coal, pig iron, canned goods, agricultural machinery and many other things which Canada is as well fitted to supply as any country in the world, and the demand for these things is increasing rapidly year by year. During the last twenty years the imports of Mexico have increased from $15,000,000 to $65,000,000, and trade there is making more progress at the present time than ever before. That at present the circumstances are specially favorable to successful trade between Canada and Mexico will be seen from the fact that the Mexicans themselves—both Government and people—are very desirous of promoting and assisting it. The inversion of Canadian capital into Mexican enterprises, the visits to Mexico of the Canadian Postmaster General, the forming in Mexico of a strong Canadian Club for the purpose of creating a vogue for Canadian goods and other circumstances, have greatly strengthened this desire, and with it all there is a friendship which the Mexicans have long felt for the Dominion, both as a British country and as a sister American nation, with whom they have had no territorial misunderstanding.

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

393 **Agencies—London**—A firm of Manufacturers' Agents in **London, England**, who have represented an important Canadian exporting house for some time past, desire to take on further agencies, and prefer such articles as implements, woodenware, etc. Their method of doing business has been to work on commission with nominal allowances for expenses, and they cover all the British Isles.

394 **New York**—A **New York** firm of foreign, domestic and commission merchants who have established connections with India, China, Japan, Phillipines, South Africa and South America, and already represent some Canadian houses, are desirous of extending their connection.

395 **Vancouver, B.C.**—A firm of importing and exporting agents in **Vancouver, B.C.**, are desirous of representing Eastern manufacturers to dispose of their goods both on the coast and in foreign markets.

396 **Beans**—A **London, England**, firm is desirous of obtaining supplies of Canadian Wonder beans.

397 **Bicycles and Accessories, rubber tires, sporting goods**—A Company in **Wellington, New Zealand,** established in the wholesale and retail trade since 1902, desires to purchase the above articles. He asks for quotations, f.o.b. port, and will remit 25% of value of goods with order, balance against sight draft. References are forwarded.

398 **Buckets, Wood**—Inquiry has been made from **England** for fifty thousand wood buckets, 13 and 14 inches in diameter, to hold 28 lbs. lard.

399 **Butter**—An **English** firm doing a wholesale butter trade has asked to be placed in communication with a few good butter shippers in Canada, with a view to securing direct shipments.

400 **Butter, Cheese, Bacon, Lard**—A firm of merchant shippers, produce brokers, and agents, trading with West Africa, are desirous of opening up business with Canadian exporters of butter, cheese, bacon, lard, etc.

400 **Butter, Cheese, Bacon, Lard**—A firm of merchant shippers, chant shippers, produce brokers and agents, established 1889 in **Gloucester, England**, and handling all kinds of goods suitable for sale on the West coast of Africa, desires to correspond with shippers of the above lines and any articles suitable for the wholesale grocery and provision trade. They are at present prepared to contract for from 1,000 to 2,000 boxes of Canadian June cheese. Terms, cash against documents.

402 **Cans, Butter**—A **New Brunswick** dairy company owning several cheese and butter factories, inquire for makers of butter cans in which to pack butter for export.

403 **Chair Legs and Brush Handles**—Inquiry has been made for names of Canadian firms in a position to supply large quantities of the above.

404 **Cheese, Canned Salmon, Condensed Milk, Honey, Eggs**—A general merchant, established for seven years in **Glasgow, Scotland,** is prepared to purchase the above articles in large quantities. Payment will be made cash on delivery; quotations are asked f.o.b. port. He also wishes to sell on commission, bicycles and pianos. References are provided.

405 **Dairy Produce, Tinned Meats, etc.**—A general dealer in **Glasgow, Scotland,** desires to communicate with shippers

of the above. Arrangements will be made for cash payments.

406 **Envelopes and Writing Pads**—A dealer in musical instruments and stationery in **Mossel Bay, South Africa**, wishes to purchase, cash against bill of lading, the above goods. Quotations are asked f.o.b. Mossell Bay. A bank is forwarded as reference.

407 **Flour**—A wholesale dealer in flour and beans, established 1890, in **Stockholm, Sweden,** desires to represent a Canadian shipper of flour similar to that manufactured by Washburn, Crosby Co., Minneapolis. He wishes to handle the same on a commission basis, payment to be arranged cash against documents. References are forwarded.

408 **Foundry and General Engineering Supplies**—Correspondents about to start a manufacturing business in **Western Canada,** desire to purchase steam and gasoline engines, lathes, drilling machines, fans, blowers, and in fact, all such articles as are needed in a foundry and general engineering business.

409 **Furniture, House and Store**—A correspondent in **Manchester, England,** who already represents an important Canadian house, desires to take on other lines, and is prepared to handle any kind of goods suitable for house furnishers, stores, etc.

410 **Hair, Horse**—The names of Canadian shippers of horse hair, clean washed, long, white or black, and assorted according to length, have been asked for by an **English** firm.

411 **Hogs**—An importer of dairy and other produce in **England,** has requested to be placed in communication with first hand sources for obtaining regular shipments of frozen hogs, weighing dead and cleaned, 1 to 1 1-4 cwts.

412 **Lumber, Spruce, White Pine and other; Bent Wood and other Furniture, Pressed Hay, etc.**—A merchant and banker in the **Canary Islands**, who has carried on a wholesale and retail business since 1867, desires to purchase the above articles. He asks for quotations f.o.b. Canadian port; payment will be made draft with documents.

413 **Pulp-wood**—An agent at **Zurich, Switzerland,** has asked to be placed in touch with exporters of wood pulp from Canada. He also wishes to correspond with large buyers in Canada of real and artificial silk, lace, embroidery, hat braids, etc., which he can buy advantageously.

414 **Scale, Yellow**—A North of England firm has made inquiry for yellow scale 124 to 126° melting point, for the manufacture of candles, which they now import from U.S.A.

415 **Scales**—A correspondent in **Waingaro, N.Z.**, desires to purchase scales for weighing live stock.

416 **Whisky**—An important firm of Scotch whisky distillers, in **London, England,** whose whisky is already well-known in Canada, desires to appoint agents in Halifax, Quebec, Montreal, Toronto, Winnipeg and Vancouver.

417 **Woodenware, Plumber's and Brass Founder's Supplies, Refrigerators, Lawn Mowers, Garden Tools, Malleable Castings**—A gentleman established seven years in the wholesale hardware business in **London, England,** desires to procure the above articles in Canada. He prefers to act as agent, but is prepared to purchase or sell on commission.

A POOR SHOWING.

Thomas Macfarlane, Analyst-in-chief of the Dominion Government, in a recent report, gives the startling information that of seventy-four samples of jams and jellies collected at hazard from different parts of the country and analysed, but fourteen were genuine, five being doubtful and fifty-five adulterated. The adulterated samples constituted 73.3% of the whole, notwithstanding the fact that none of the samples were condemned on account of the use only of preservatives or artificial dyes. The following are the figures given:—

	Genuine.	Doubtful.	Adulterated.	Total.
Raspberry jam	2	1	16	19
Strawberry jam	1	1	17	19
Plum jam	3	1	8	12
Peach jam	0	2	5	7
Miscellaneous	0	0	2	2
Jellies	8	0	7	15
	14	5	55	74

In connection with the foregoing, Mr. Macfarlane says: "The position of this branch regarding the adulteration of jams and jellies may here be stated. They are, as Webster defines jam, the products of boiling fruits with sugar and water. The only word in this definition about which any doubt can exist, is the word 'sugar.' This is defined by the same authority as 'a sweet crystalline substance, obtained from certain vegetable products, as the sugar cane, maple, beet, sorghum, and the like.' This identifies sugar as the substance known to chemists under the names cane sugar and sucrose. Commercial glucose is not grape sugar, but a product of the action of acids on starch, of very indefinite composition, always containing, as well as reducing sugars, dexterine, water, etc. Every grocer and consumer understands quite well what is meant by sugar, and the substitution of commercial glucose for it in ordinary trade would not be tolerated. It is also to be remembered that reputable manufacturers of jams and jellies use only cane sugar in preserving.

Similar views to the foregoing prevail in other countries and more especially among the Boards of Health in the United States.

In general the rulings of the latter are to the effect that fruit jellies, preserves, canned fruits, etc., must consist of the fruit specified on the label of the package, preserved only with cane sugar, and must not contain artificial flavors, coloring matters or preservatives. If such articles contain any substitutes for the fruit, or any material to make bulk or weight, they are considered to be adulterated."

FREIGHT CLAIMS—SUGGESTIONS.

(*Continued from page* 842).

contains instructions as to how to proceed, and reads in the following manner:—

(1) If consignment is observed to be damaged before removal from railway premises, bring same to the attention of the railway agent, and have him note the facts upon advice note or upon original paid freight bill.

(2) If a shortage from package is observed, follow out same procedure.

(3) If damage to goods or shortage from packages is not discovered until after receipt of property on consignee's premises, notify railway agent immediately so that he may make inspection and report while the facts are fresh and full information is obtainable.

(4) Always mail claims direct to the freight claim agent or other official of the railway in charge of freight claims. When making claim for loss or damage, enclose original or certified copy of invoice together with original bill of lading and, when possible, original or certified copy of the receipt for freight charges; in the case of claims for overcharge, the original paid freight bill should accompany claims.

It is claimed for the railway companies, generally speaking, that they recognize all legitimate freight claims against them, but a reasonable time is asked in which to conduct their investigations, and where more than one railway is involved a longer period is necessary. If claims are properly submitted, as indicated in these instructions, to the railway official in charge of freight claims department, a great deal of time should be saved in the initial investigation, and this necessarily will result in facilitating settlement.

Among the Industries

THE MANUFACTURERS OF CANADA.

Probably no manufacturer in the Province of Ontario is more widely known or more generally esteemed than Mr. George Booth, of the Booth Copper Company, of Toronto. And like the man so are the products of the industry over which he has so successfully presided during the last twenty-one years.

Mr. Booth was born in Cranbrook, Kent County, England, and with his father, Mr. H. G. Booth, came to America in the year 1844. The family first settled in the Eastern States, residing for a number of years in Pittsburg and Cincinnati, from whence they moved to Buffalo, where Mr. Booth served his apprenticeship as coppersmith with Sydney Sheppard & Co.

In those days the country adjacent to the shores of Lake Ontario, now replete with all that progress and civilization can



No. 15.

GEORGE BOOTH.

give, was mostly as the hand of Nature had left it, and Mr. Booth tells some amusing tales of the life of the pioneers of this section of Canada and the States. Toronto's first railroad connection was yet a thing of the future, and although Buffalo could boast of one, the road itself was evidently not very popular nor transportation on it very fast, for travelling was mostly done by means of what were known as Canal Packet boats. These canal boats made the trip from Buffalo to Albany in something like three days. Some of them, which were built in sections, were divided into two parts when one canal's end was reached, and carried over the Alleghany mountains to the canal on the other side.

Like many of the sturdy Britishers who helped to lay the broad foundations of Canadian nationality, Mr. Booth's father, desiring to live again under the flag of Great Britain, moved with his family to St. Catharines, and later (in 1855) founded in Toronto the splendid business which, since 1884, has been known as the Booth Copper Company.

Mr. Booth was married in 1869 to the daughter of W. H. Smith, of Avon Springs, N.Y., and his three sons, like their father and grandfather, have dedicated their energies to copper industries. Mr. Clarence H. Booth is manufacturing in Detroit, Mich. Messrs. Arthur Geo. and Walter E. are co-partners with their father in the Toronto concern.

While eminently successful in guiding the fortunes of his own private business, Mr. Booth has always been a practical worker for the advancement of all matters pertaining to the industrial growth and progress of the Dominion and especially of the Province of Ontario. He is an honorary member of the Board of Control of the Industrial Exhibition, and with the exception of two years, has since the Exhibition was inaugurated, been a working member of that body.

Of the Canadian Manufacturers' Association, Mr. Booth is a veteran and the "Grand Old Man." With the exception of two years he has been Treasurer of the organization since its inception, and enjoys the distinction of being its only life member. During his long term of office he has taken the keenest interest in the Association's welfare and no man has worked harder to safeguard its interests or guide it along the roads of success.

The Napoli Macaroni Company, who have been manufacturing in Toronto, have moved their entire plant to fine new premises in St. Catharines, where all communications should in the future be addressed them.

Grip, Limited, one of Toronto's most progressive engraving firms, have completed extensive alterations to their offices and workshops. Their new quarters, occupying three floors in the Saturday Night Building, are second to those of no firm in a similar line of business on the Continent. They have also opened up a branch in Montreal.

After months of annoying delays The Cowan Co., Limited, Toronto, are now about ready to take possession of their splendid new factory. The capacity of the new plant will be almost double that of the old one, the output will be correspondingly increased and a number of new lines of cocoa preparations will be made.

The Ontario Wind Engine and Pump Company, Limited, of Toronto, have received an order from the British Government for fifteen of their air motors with pumps, etc., complete. The Ontario Wind Engine and Pump Company have enjoyed the patronage of the British Government for the last seven years.

The Canadian Time Recording Company, Limited, have removed their sales department to 38 Yonge Street Arcade, and their factory and office to 19-23 Alice Street. The factory has been equipped with new and up-to-date machinery for the manufacture of Time Records and Watchman's Time Detectors. The output has now a most enviable reputation.

Canadian Letters Patent were granted in May last for the incorporation of the Canadian White Company, Limited, with headquarters at Montreal. On similar lines to J. G. White & Co., Inc. of New York, S. J. G. White Co., Limited, of London England, and the Waring-White Building Co., Limited, London, England, the new Canadian concern will carry on a general contracting and engineering business. It will be fully equipped to handle large construction contracts for steam or electric railways, and will be prepared to design, build, equip and operate electric lighting plant and power installations, gas works, water supply, sewage system, piers, docks, harbor works, office buildings, apartment houses, hotels, etc.

The contracting and engineering departments of the New York and London companies mentioned, will at all times be at the service of the Canadian company, so that from its inception it will enjoy the benefits and advantages of long and successful experience in the contracting and engineering business.

SCIENTIFIC NOTES.

Canadian Invents a Smokeless Explosive.

Dr. Archibald, a Brockville chemist, has recently completed experiments which resulted in his being able to produce a first class smokeless explosive from starch. For some months past Dr. Archibald has been in St. Petersburg making tests, and has sold his invention to the Russian War Department. The new explosive is manufactured in sheets like glass. It is elastic and unsusceptible to heat or cold and cannot be fired by shocks.

Practical Care of Boilers.

In a series of "Bulletins" which are being published at regular intervals, the Canadian Casualty and Boiler Insurance Company of Toronto, are offering to their clients and steam users generally, some most valuable information in regard to the care and treatment of steam boilers. Among the subjects so far treated are "Boiler Feed Water," "Purifying Water for Engines," "Boiler Scale and Boiler Feed" and "Oil in Boilers."

New Power Scheme for Niagara.

In the June issue of The Engineering Magazine, Mr. Alton D. Adams introduces a new scheme for developing power from Niagara. This time the rapids below the Falls are to be utilized. In the five miles between the Falls and Lewiston there is a drop in the river of something like 100 feet, and 2,500,000 horse-power are at present going to waste. Mr. Adams says:—

"This energy, represented by the normal discharge of 222,000 cubic feet of water per second, is now expended in excavating the great gorge in which the White Horse rapids, the whirlpool, and Niagara Glen are located. Fully 80 feet of this fall along the rapids occurs between a point several hundred feet south of the Cantilever Bridge and another at the lower end of the glen, which can be connected by a tunnel some 10,000 feet long, on the New York side of the river. With the head of 80 feet and the discharge of 222,000 cubic feet per second, named above, these rapids thus develop 2,000,000 horse-power as mechanical motion and heat. This power is fully one-half as great as that of the American and Horse Shoe Falls combined, since the volume of water is substantially the same in the falls and the rapids, and the descent of the former is only twice that of the latter. Making the fair assumption that 60 per cent. of the gross energy in the water of these rapids can be transformed into electric current, the output of plants utilizing the entire flow would reach 1,200,000 horse-power. This capacity is nearly double that of the six great electric power stations that are now in various stages of completion about Niagara Falls, three on the New York and three on the Canadian side of the river. . . .

"If advantage is to be taken of the steeper parts of the rapids, both above and below the whirlpool, so as to obtain an operating head of not less than 80 feet of water by a tunnel, the intake end of the tunnel on the New York side of the Niagara River should be located beneath the water level at a point some 400 feet above the Cantilever Bridge, and the lower end should discharge into the gorge about 7,000 feet down stream from the whirlpool. A tunnel in a straight line between the openings just named would represent one side of a triangle, with the chains of rapids above and below the whirlpool respectively for the other two sides. . .

"While the power development just considered, with a tunnel whose intake is above the rapids and whose outlet is below in the gorge, is more attractive than any other that is practicable on the lower river, because it offers the greatest head for anything like the same length of tunnel, it is by no means the only possible one there. In fact, there are numerous locations, both above and below the whirlpool, where hundreds of thousands of horse-power may be developed under heads of 20 to 60 feet, with only moderate investments in plant construction. On the New York side of the river the great promotory of limestone and shale, that separates the rapids above from those below the whirlpool, might be pierced by an indefinite number of tunnels that would give heads of water roughly proportionate to their lengths."

Mr. Adams' plan also includes the building of an hundred foot dam at Lewiston, which would, of course, drown the rapids and convert the whirlpool into a comparative mill pond. By this means, however, 1,500,000 additional electric horse-power would be developed at a much lower cost per unit than by securing it by tunnelling between different points in the gorge.

"At this dam fully 60 per cent. of the energy of 222,000 cubic feet of water per second falling 100 feet and developing 2,500,000 horse-power may be transformed into electric current. If the question of power development at the escarpment was the only one to be considered, the dam at Lewiston might be 200 feet high without overflowing the sides of the gorge; but such a dam would raise the water basin at the foot of the American and Horse Shoe Fall 100 feet, thereby destroying these falls in a large degree, and also the value of the great generating stations that draw water from the upper river. A dam about 100 feet high, corresponding to the drop of the river surface from the foot of Niagara Falls to Lewiston, 5 miles below, would work no substantial injury either to the natural falls or the existing power plants."

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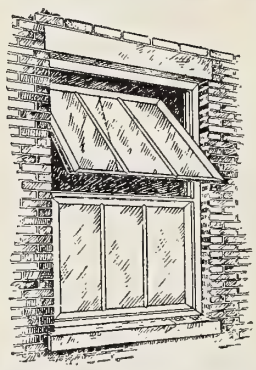
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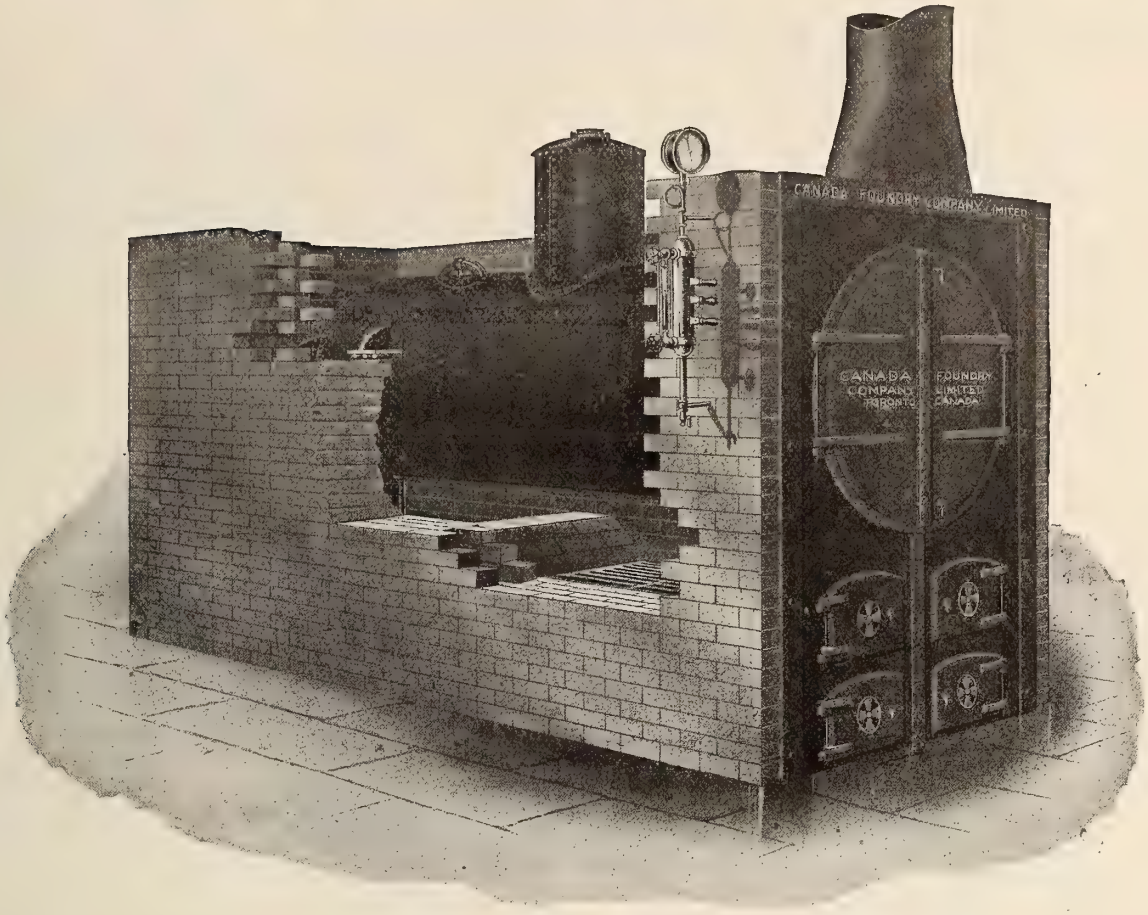
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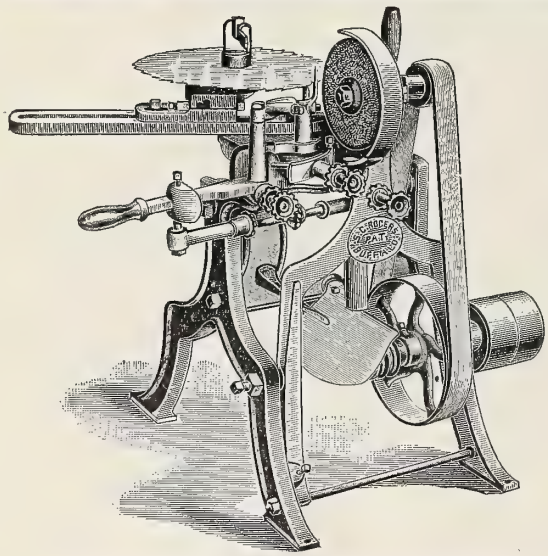
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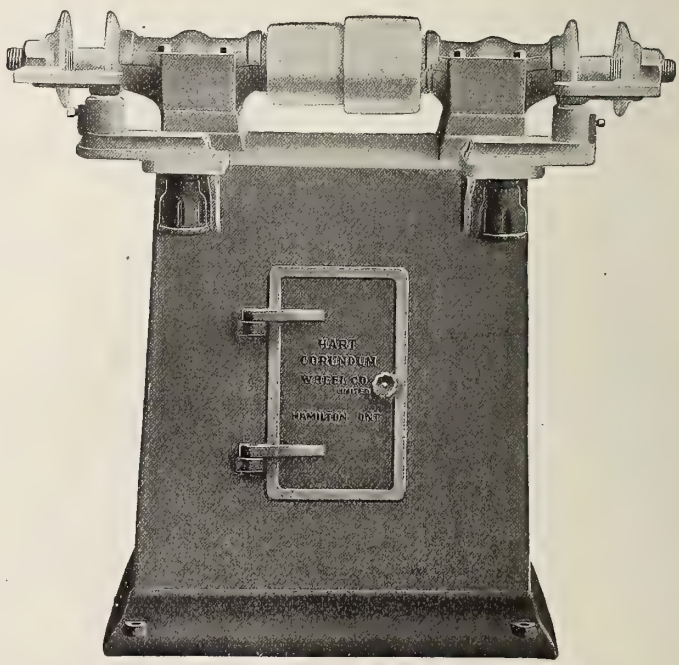
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Countershaft has cone pulleys 15 x 16 x 4½ inch face.
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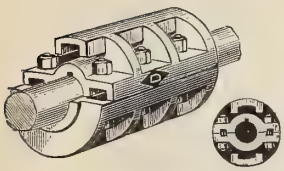


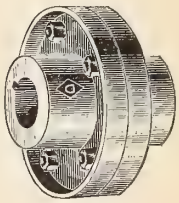
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Leather preservers and belt dressings.
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The Campbell Mfg. Co., Limited

Hamilton, Canada

DODGE



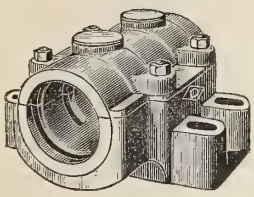


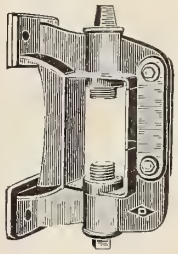
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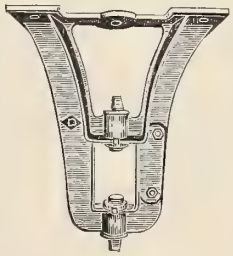


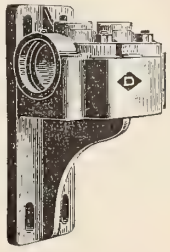
HIGH GRADE TRANSMISSION MACHINERY

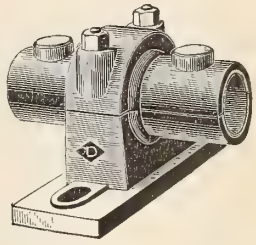
MADE IN CANADA



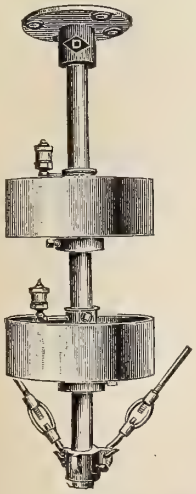


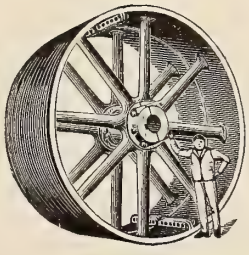


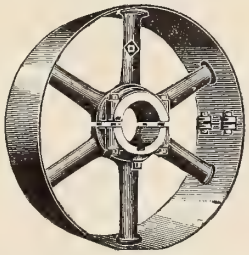


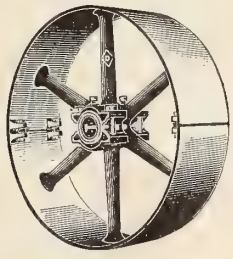


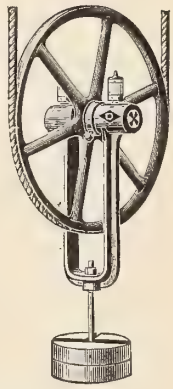
MODERN DESIGN











WE CARRY VERY LARGE STOCKS OF ALL STANDARD LINES
FOR QUICK SHIPMENT. ALL OUR OWN MANUFACTURE.

DODGE MANF'G CO., Toronto, Montreal Branch 419 ST. JAMES STREET

1905 1905

DOMINION FAIR

SEPTEMBER 27 TO OCTOBER 7

Under the Auspices of

THE ROYAL AGRICULTURAL AND INDUSTRIAL SOCIETY

in the Historic and Picturesque City of

NEW WESTMINSTER - - B.C.

Located in the Lower Fraser Valley—"The California of Canada."

$100,000.00 IN PRIZES AND ATTRACTIONS $100,000.00

THE RAREST OPPORTUNITY Canadians have ever had to comprehend the vastness of the Dominion, its varied and unlimited resources, and to realize the great possibilities of trade development within its borders, is offered at the 1905 National Exhibition in the Royal City of British Columbia.

SPACE FOR EXHIBITS of all sorts of natural products and manufactured articles all over the Dominion.

APPLICATIONS FOR SPACE in the Manufacturers' Building can be made to R. J. YOUNGE, Secretary of the Canadian Manufacturers' Association, who will forward them to New Westminster.

THE PRODUCTS OF BRITISH COLUMBIA will be displayed in abundance and variety that will be amazing to the people of the older Provinces. These Exhibits will include :

THOROUGHBRED LIVE STOCK AND AGRICULTURE
Luscious Fruits, Flowers, Fragrant and Beautiful, Mammoth
Timbers, Minerals, Fish, Game, etc., etc.

ATTRACTION FEATURES

The attractions, day and night, during the eleven days of the Dominion Fair, will provide entertainment of such a unique character as British Columbia is alone in a position to present.

There will be gathered together from all parts of the expansive Province, and assembled on the banks of the Fraser 12,000 Indians, who will exhibit their strange paraphernalia of peace and war, their still primitive modes of transportation, their works of semi-civilized art and superstitious fancies, affording an insight into their weird but interesting ideas of creation and life. A programme of sports will be provided for them, and as the different tribes come into competition the usual life and death struggle for supremacy will result.

World's Championship Events in Rowing and Lacrosse, Military Parades and Exercises, Horse Racing, Wild West Bronco "Busting" Exhibitions by the most daring riders of the plains, music by world famous bands, stupendous and dazzling pyrotechnic and electrical displays.

GRAND WATER CARNIVAL—Parade of the Fraser River Salmon Fishing Fleet, Patrol Boats, H.M. Warships, etc.

THE SOCKEYE RUN—Where all such shows as are to be found on the Midway, Pike or Trail of World's Fairs will hold forth in confusion.

FOR ALL INFORMATION WRITE

W. H. KEARY, Secretary and Manager,
NEW WESTMINSTER, B.C.

Aug. 26th, 1905 **Sept. 12th, 1905**

CANADIAN NATIONAL EXHIBITION OF TORONTO



We shall be glad to receive your application for space in the Manufactures and Liberal Arts Section, which includes:

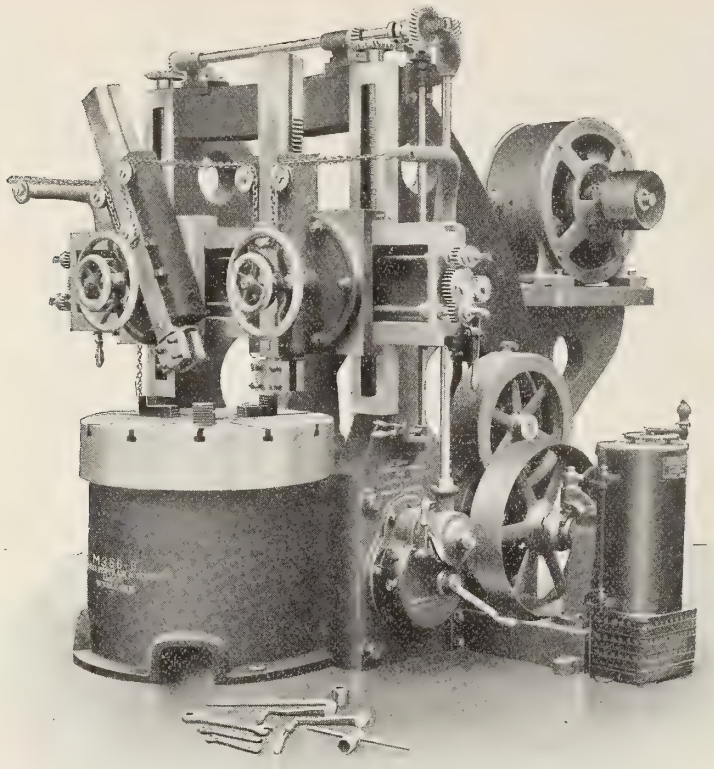
Manufactures & Liberal Arts Building,
Transportation Building,
Stove Building,
Agricultural Implement Building,
Machinery Hall,
Dairy Machinery Exhibits,
Automobile Department and

PROCESSES OF MANUFACURE.

Special inducements will be offered to Exhibitors for display of "Process of Manufacture," or machinery in motion. Correspondence invited. Address

C. B. McNAUGHT,
General Superintendent of Manufactures.

Office:—70 KING ST. E., TORONTO, ONT.

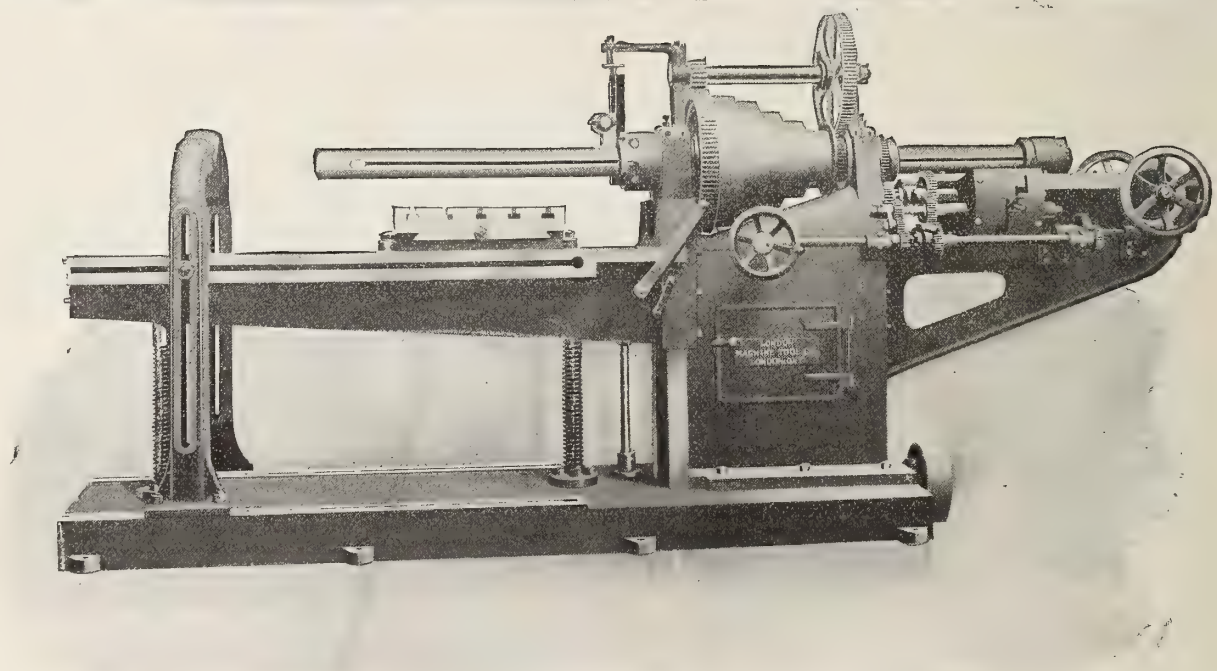


BERTRAM'S RAPID REDUCING MILLS

The merits of our Boring and Turning Mills have won the approval and substantial support of those who are responsible for results in some of the representative shops in Canada. Men who have never dared to risk their reputation for thrifty management and careful buying have commended our Boring Mills, and proved their faith by buying. It is worse than folly to deny that there are other good boring and turning mills, but the Bertram would have never been produced if its designers and makers had not seen an opportunity to build a mill that would sell the better from comparison with the best of other machines. Our 42″ mill has fully justified in performance our most sanguine expectations, and we not only invite a searching investigation of every feature, but freely solicit comparison with other machines of its type.

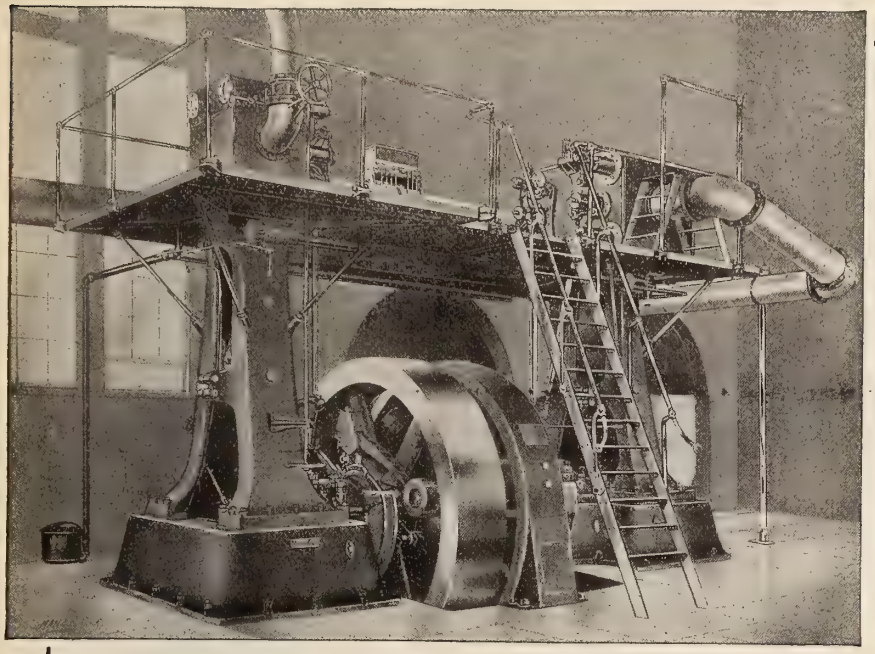
Descriptive circulars for the asking.

THE
JOHN BERTRAM & SONS CO.
LIMITED
DUNDAS - ONTARIO - CANADA.



HORIZONTAL BORING MACHINE

LONDON MACHINE TOOL CO.,
LONDON, ONT.



Robb-Armstrong Corliss Engines

Horizontal and vertical; simple, tandem and cross compound.

Robb Engineering Co., Ltd., Amherst, N.S.

AGENTS—Wm. McKay, 320 Ossington Avenue, TORONTO. Watson Jack & Company, Bell Telephone Building, MONTREAL.
J. F. Porter, 355 Carlton Street, WINNIPEG.

THE WATEROUS ENGINE WORKS CO., LIMITED

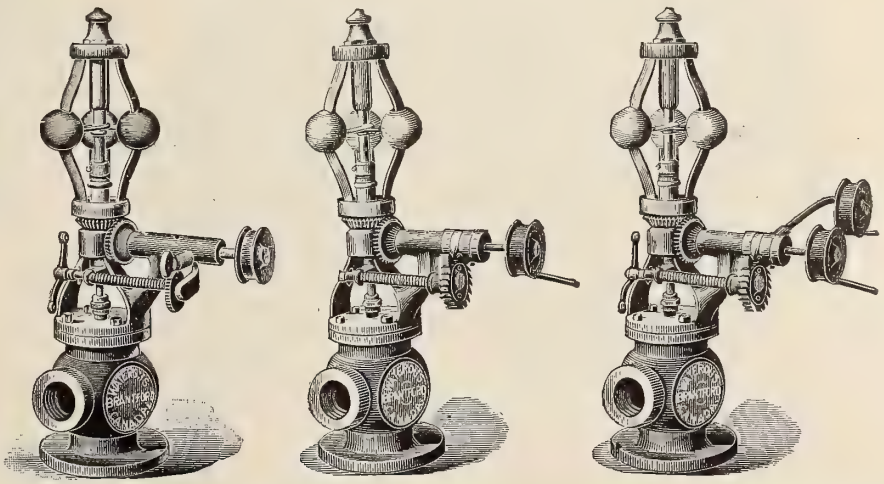
BRANTFORD - - CANADA

MANUFACTURERS OF

The Celebrated Pickering Governor

WILL REGULATE THE SPEED OF ANY ENGINE

Built in all Sizes.



We always keep a stock of these Governors on hand.

GET OUR PRICES



A Successful Railway Roller Bearing

AS PROVEN BY THE FOLLOWING:

THE HENDERSON ROLLER BEARING MANUFACTURING CO., LIMITED,
785 King Street West, Toronto, Ont.

HAMILTON, CANADA, 27th August, 1904.

GENTLEMEN,—*Re Working of Bearings on Freight Car.* Your Roller Bearings have been in operation on our heaviest car since shipment of trucks to us some ten months ago, and are giving perfect satisfaction. We find on examination the condition of the Bearings is as good as when they were installed. We have placed them on our heavy freight car so as to give them the severest test possible on our system. The length of our freight car is 58ft., weighs about 15 tons, and carries from 15 to 18 tons of freight, running over 108 miles daily.

We find that the car coasts fully one-third farther than the other cars. We have had no hot boxes since installation, and have saved 90 per cent. of the amount of oil required by the ordinary journals, while no waste is required and no time lost replacing brasses and packing, besides avoiding the drip of oil which is so evident in the ordinary stuffbox.

Judging from results up to date the Bearings will not require renewing for years. We expect to have all our heavy cars equipped as soon as possible.

Yours truly, (Signed) HAMILTON, GRIMSBY & BEAMSVILLE ELECTRIC RY. CO.
GEO. E. WALKER, Manager.

THE GRAND VALLEY ELECTRIC R.R. have several cars already in use, and expect to equip throughout their whole system.

THE TORONTO RAILWAY CO. are now using them and are delighted with them.

In use in scores of factories in Canada from east to west. Also on Vehicles, etc.

As the present premises are overtaxed in filling orders, a site has been secured on King St., west of Subway, where a new factory will shortly be erected.

ALL BEARINGS GUARANTEED

THE HENDERSON ROLLER BEARING MANUFACTURING COMPANY, Limited

Head Office: 403 TEMPLE BUILDING, TORONTO. Factory: 785 KING ST. WEST.

The Chapman Double Ball Bearing

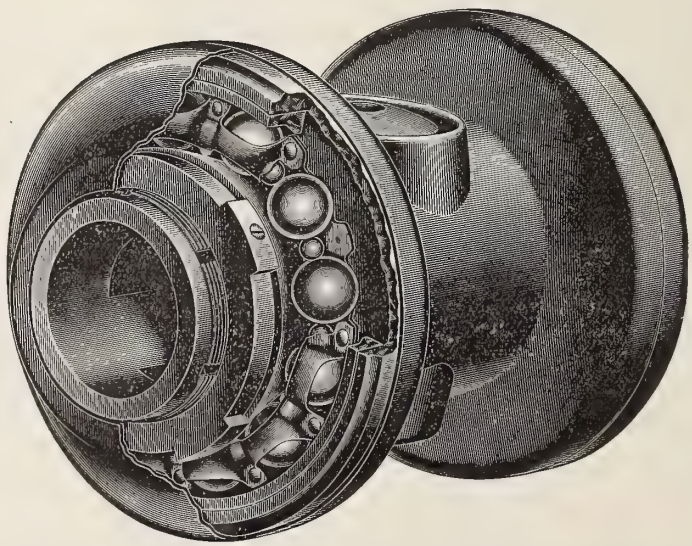
100 PLANTS EQUIPPED IN CANADA

A Bearing Simple in Construction and Practical in Operation

"As near as we can estimate there is, we should think, at east fifty per cent. saving in power with the Chapman bearings.

"ALABASTINE CO., LTD.,
"Paris, Ont.

Durability and Economy of Operation Secure its Adoption



A Bearing having the Highest Known Efficiency as a Power Saver

"We are of the opinion, in our case, that we save at least twenty per cent. in power with the Chapman Double Ball Bearing, and we also find a great saving in oil. The bearings are also clean; we have no oil running down hangers, posts, etc.

"Yours truly,
"MCLAUGHLIN CARRIAGE CO., LIMITED,
"Oshawa, Ont."

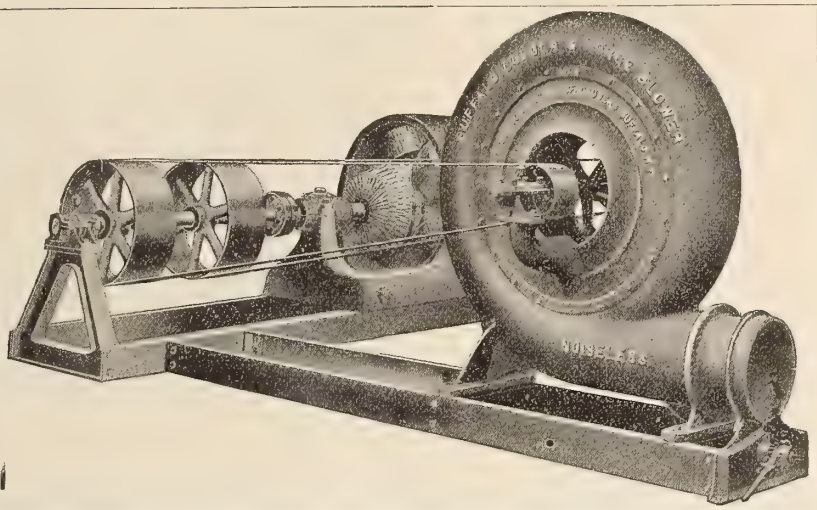
We Guarantee You a Saving of 75 per cent. of Your Shaft Friction

THE CHAPMAN DOUBLE BALL BEARING CO. OF CANADA, LIMITED

Office—39 Scott Street. Factory—39 Pearl Street, TORONTO

CANADIAN BUFFALO STEEL PRESSURE BLOWERS.

"The running record of a Blower embraces its effectiveness, its consumption of power, its maintenance, cost, and its period of usefulness, and should be the determining factor in its choice."—(Extract from BLOWER CATALOGUE.)



NOTE THE CONSTRUCTION.—To draw the blast wheel it is only necessary to take off a side plate, which does not disturb the alignment of shaft, nor is it necessary to take the blower from its foundations.

Steel Pressure Blower with Motor Direct Connected to Countershaft. Note the Ratchet for Sliding Blower on its Base, which permits the Use of an Endless Belt.

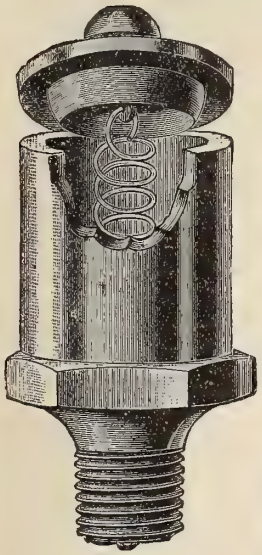
Buffalo Goods are **MADE IN CANADA** by

THE CANADIAN BUFFALO FORGE CO., LIMITED.

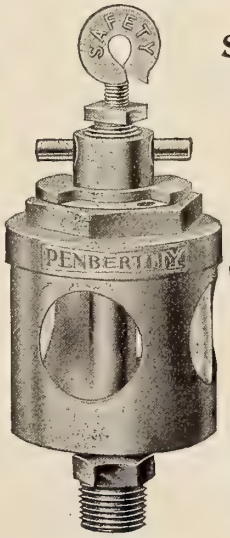
Office and Works - - MONTREAL, Quebec.

GENUINE TRADE PENBERTHY MARK

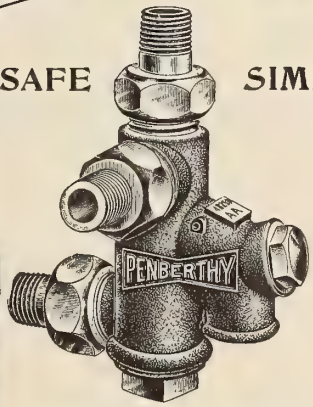
SAFE SIMPLE



I.X.L.
Spring-Top Oiler
Can't Lose the Cover



SAFETY
Crank Pin Oiler



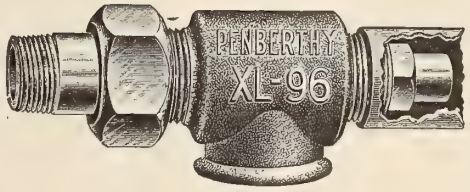
AUTOMATIC INJECTOR

THE BEST FINISHED GOODS ON the MARKET

ASK YOUR DEALER



PLAIN BRASS OILER
Will stand hard usage



X.L.-96
JET PUMP or SYPHON
For Elevating Liquids

WRITE FOR OUR CATALOG No. 2.

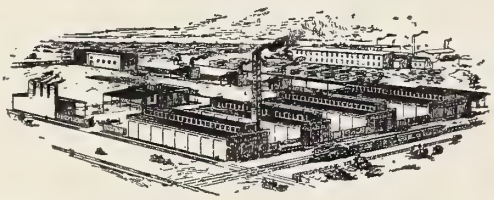
TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

Write for 100 page Illustrated Catalogue. Every dealer should have a Copy for Reference.



BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE - - - - ONT.

SPECIAL PRICES FOR EXPORT ON

Wood and Iron Hames,
Leather Dashes and Fenders for Carriages and Automobiles.

MALLEABLE IRON CASTINGS.

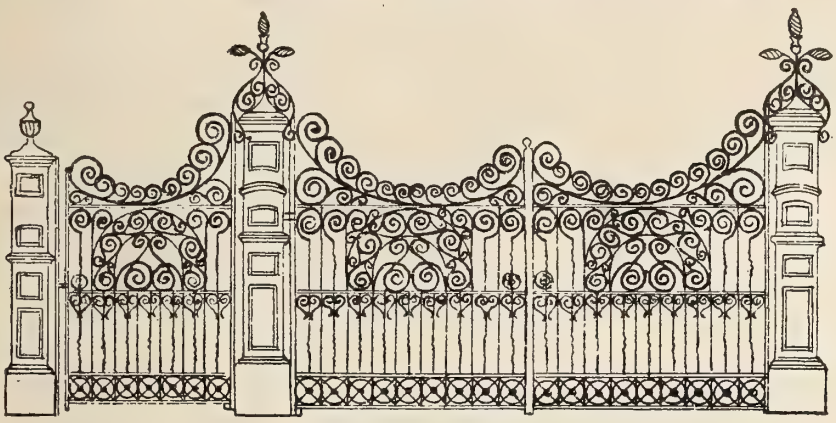
Tinned Goods Our Specialty.

McKinnon Dash & Metal Works Co.,
LIMITED
ST. CATHARINES - ONTARIO

Makers of

CARRIAGE AND SADDLERY HARDWARE

THE **GEO. B. MEADOWS** TORONTO WIRE, IRON AND BRASS WORKS CO., Limited.



OUR

CATALOGUE No. 5

DEALS WITH

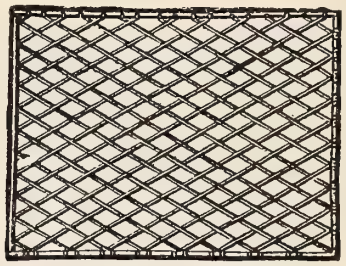
Iron Fences

WE MAKE THEM TO PLAIN OR ELABORATE DESIGNS

WE ALSO MAKE

WINDOW GUARDS

FOR FACTORIES



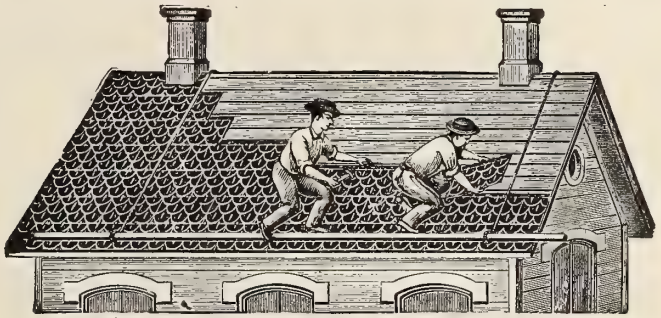
Wire Cloth, Wire Screens for Railroad, Mine and Mill Purposes;
Bank Fittings in all Finishes; Electro Plating;
Specialties in Art Metal Work

THE GEO. B. MEADOWS TORONTO WIRE, IRON AND BRASS WORKS CO. Limited

117 KING STREET WEST, TORONTO, CANADA

PEDLAR'S STEEL SIDING AND SHINGLES

At $2.00 and $2.55 per 100 Square Feet.



Painted red on both sides. Most durable and economical covering for **Roofing or Siding for Residences, Houses, Barns, Elevators, Stores, Churches, Poultry Houses, Cribs, etc.** Easier to lay and will last longer than any other covering. Cheaper than wood shingles or slate. No experience necessary. A hammer and snips are the only tools required. It is semi-hardened high grade steel. **Brick or Stone Siding at $2.00 per 100 Square Feet. Pedlar's Patent Steel Shingles at $2.55 per 100 Square Feet.** Also **Corrugated Iron, Painted or Galvanized,** in sheets 96 inches long. **Beaded and Embossed Ceilings. V Crimped Roofiing.** 2000 designs of Roofing, Siding and Ceilings in all grades. Thousands of buildings through the Dominion covered with our Sheet Metal Goods, making them

FIRE, WATER AND LIGHTNING PROOF.

Send in your order for as many squares (10 x 10 feet) as you require to cover your new or old building. The very best roofing for this climate. We can supply **Eave Trough, all sizes, Corrugated or Plain Round, Conductor Pipes, Shoes, Elbows, Spikes, Tubes.**

All goods shipped day after order is received. We are the largest concern of the kind under the British flag. Established 1861. Capital invested $150,000.00.

THE PEDLAR PEOPLE, OSHAWA, ONTARIO, CANADA,

MONTREAL,	OTTAWA,	TORONTO,	CALGARY, ALTA.,	VANCOUVER, B.C.,	QUEBEC,
767 Craig St.	423 Sussex St.	50 Yonge St.	201 7th Ave., E.	615 Pender St.	7-11 Rue Notre Dame.

WRITE YOUR NEAREST OFFICE.

POLSON IRON WORKS
Limited

TORONTO, CANADA

Steel Shipbuilders, Engineers and Boilermakers, Hydraulic and Dipper Dredges, Steel and Composite Steamers and Yachts, Marine and Stationary Engines and Boilers.

OFFICE AND WORKS

Esplanade Street East, - - TORONTO

Nova Scotia Steel & Coal Co.
LIMITED

HEAD OFFICE: NEW GLASGOW, NOVA SCOTIA

STEEL WORKS = TRENTON, N.S.
BLAST FURNACE = = FERRONA, N.S.
IRON MINES = = WABANA, NFLD.
COLLIERIES = = SYDNEY MINES, N.S.

"OLD SYDNEY COAL"
(Shipping Port, - North Sydney)

ADDRESS ALL CORRESPONDENCE TO HEAD OFFICE

MADE IN CANADA

THE STEEL RAIL MILL OF

The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.

IS NOW IN OPERATION AND TURNING OUT

A.S.C.E. STANDARD SECTION

Steel Rails

OF HIGHEST QUALITY

Your Specification will have our best attention

OFFICES
Canada Life Building
MONTREAL
100 King Street West
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DRUMMOND, McCALL & CO.

General Sales Agents
THE ALGOMA STEEL CO., Limited

SADLER & HAWORTH

TANNERS AND MANUFACTURERS OF

OAK LEATHER BELTING

AND LACE LEATHER

DEALERS IN GENERAL MILL SUPPLIES

MONTREAL
511 WILLIAM ST.

TORONTO
9 JORDAN ST.

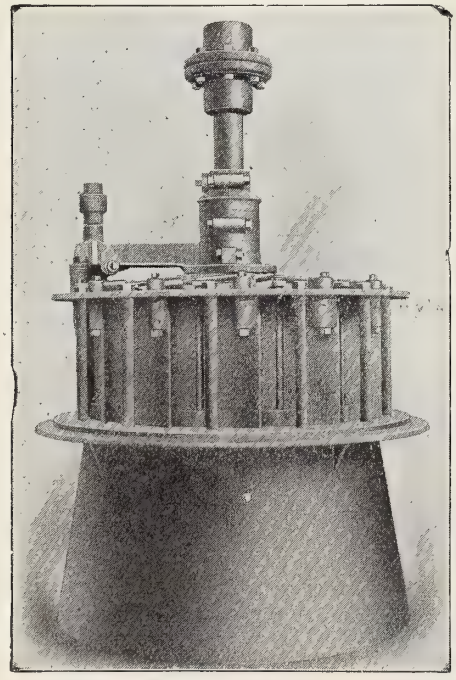
THE

SAMSON TURBINE

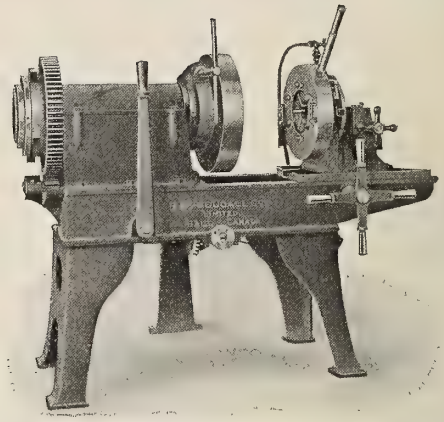
Our Samson water wheel is the result of many years' experience and study of turbine building, and it is to-day admittedly the standard for all water wheels.

Several sizes of the Samson have been tested at Holyoke, with the result that the horse power developed has been in every case at least 4 per cent. better than our catalogue tables.

Further, the speed and efficiencies have never been approached by any other turbine running under the same conditions, and developing about the same horse power.



THE WM. HAMILTON MFG. CO.
LIMITED
PETERBOROUGH, ONT.



PIPE MACHINES

FOR IMMEDIATE DELIVERY

SIZES: No. 1—2″
" 2—4″
" 3—6″

Each and every one a perfect Machine Tool, opening dies, automatic pump. Smaller sizes arranged for both hand and power. Details on request.

THE R. McDOUGALL CO., LIMITED
GALT - - - CANADA.

BOILERS

Our new Boiler Works are completed, and with new and modern equipment we are in a position to turn out the best products at short notice.

In addition to Boilers, we can supply Engines, Heaters, Pumps, Condensers, Piping and all requisites for complete steam plants.

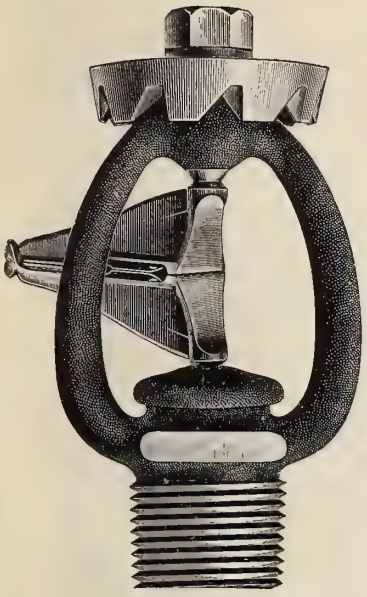
Send for Estimates.

THE GOLDIE & McCULLOCH CO., LIMITED
GALT ONTARIO CANADA

WE MAKE Wheelock Engines, Corliss Engines, Ideal High Speed Engines, Gas and Gasoline Engines, Boilers, Steam and Power Pumps, Water Wheels, Flour Mill Machinery, Oatmeal Mill Machinery, Gyrators, Emery Choppers, Wood Working Machinery, Shingle Machinery, Heading and Stave Machinery, Wood Rim Split Pulleys, Iron Pulleys, Shafting, Hangers, Friction Clutch Couplings, Friction Clutch Pulleys, Safes, Vaults, and Vault Doors.

H. G. Vogel Co.

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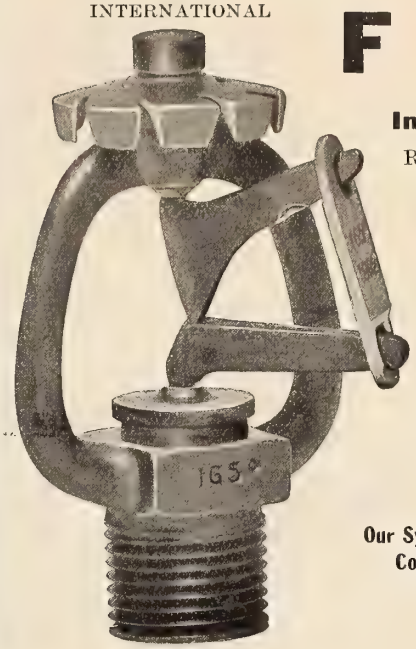
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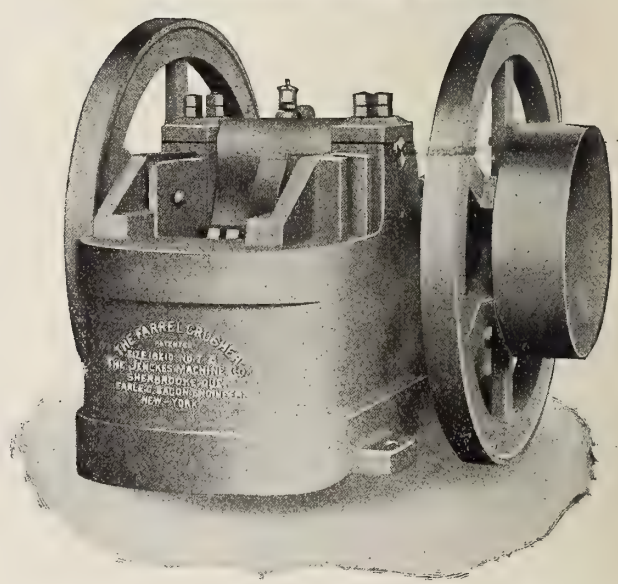
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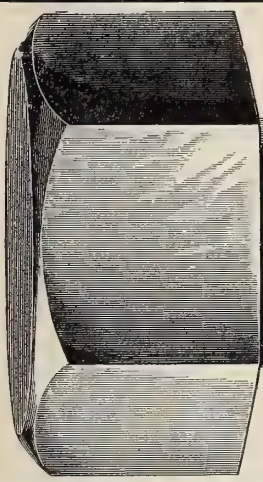
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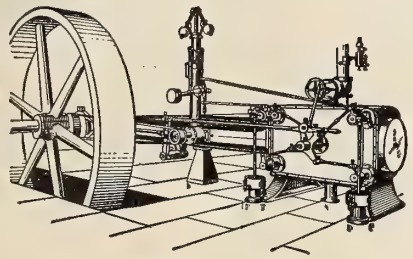
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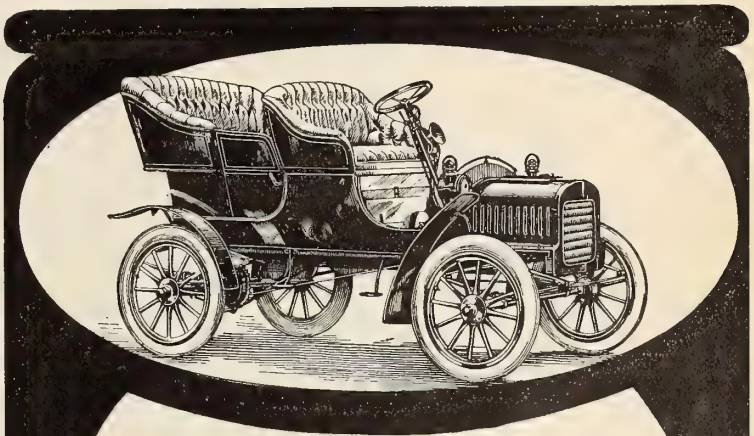
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